

166.

Non. 9213.

Library

M.O.H. Report,
1936—37.



City of Johannesburg.

REPORT of the MEDICAL OFFICER OF HEALTH on the PUBLIC HEALTH and SANITARY CIRCUMSTANCES of JOHANNESBURG during the Year 1st JULY, 1936—30th JUNE, 1937.

ARTHUR J. MILNE, M.B., CH.B., D.P.H., D.T.M.

*Medical Officer of Health; Hon. Cons. Medical Officer of the Rand Water
Board; Lieut.-Colonel, Union Defence Force; Past President, South
African Health Officials' Association.*

JOHANNESBURG,

APRIL, 1938.



JOHANNESBURG:

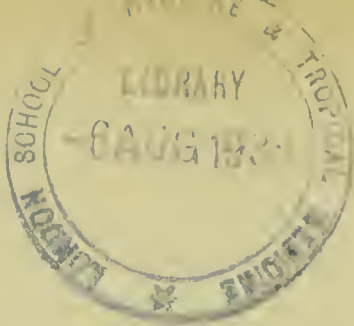
Printed by RADFORD, ADLINGTON, LIMITED,
Marshall and Rissik Streets.

1938

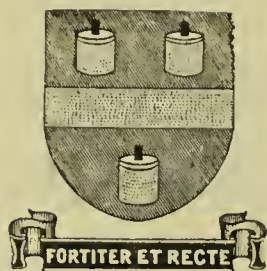


Digitized by the Internet Archive
in 2019 with funding from
Wellcome Library

<https://archive.org/details/b31488043>



M.O.H. Report,
1936—37.



City of Johannesburg.

REPORT of the MEDICAL OFFICER OF HEALTH on the PUBLIC HEALTH and SANITARY CIRCUMSTANCES of JOHANNESBURG during the Year 1st JULY, 1936—30th JUNE, 1937.

ARTHUR J. MILNE, M.B., CH.B., D.P.H., D.T.M.

*Medical Officer of Health; Hon. Cons. Medical Officer of the Rand Water
Board; Lieut.-Colonel, Union Defence Force; Past President, South
African Health Officials' Association.*

JOHANNESBURG,
APRIL, 1938.



JOHANNESBURG:
Printed by RADFORD, ADLINGTON, LIMITED,
Marshall and Rissik Streets.

1938

Report of the Medical Officer of Health, 1936—1937.

Public Health Department,

Escom House,

Johannesburg,

April, 1938.

TO HIS WORSHIP THE MAYOR (Mr. Councillor J. S. FOTHERINGHAM) AND CITY
COUNCILLORS OF THE CITY OF JOHANNESBURG.

GENTLEMEN,

I have the honour to present herewith my report of the health conditions of Johannesburg for the year 1936-37.

It is a pleasure to be able to record that the work of all members, professional, clerical and technical, of your Public Health Department has maintained the high level befitting the largest city in the Union of South Africa. Personally and officially I desire to acknowledge their valued assistance, often in difficult situations, and their loyalty both to the Council which they serve and to myself.

Due to insufficiency of office accommodation in the City Hall resultant on departmental expansion and considerable staff increase, it became necessary to seek suitable and sufficient office accommodation for the Department elsewhere. Fortunately the Council was able to arrange with the Electricity Supply Commission for the housing of the departmental offices in their new building, Escom House. Though there are disadvantages in being detached from the City Hall these are compensated for by the accommodation being adequate and commodious whilst remaining central. The transfer of the offices to the third and fourth floors of Escom House took place in October, 1936.

A notable feature of the year's work was unprecedented activity in the framing, preparation and elaboration of Housing Schemes for both Europeans and Coloured persons. These schemes included the Bertrams, Glenesk and Klipriviersberg Schemes for Europeans and the Coronation Township Scheme for Coloured persons. Slum Clearance was also considerably advanced consequent largely on the wise decision of the Council to expropriate at all costs Prospect Township—the worst slum area in the City.

A detailed record for the year of inspections, etc., undertaken by the inspectorate staff is submitted on page 46.

I also desire to express my thanks in particular to the occupant of the Mayoral Chair during 1936-37 (Councillor D. W. Mackay), and to the Chairman and Members of the Public Health Committee who extended to me kindly assistance and courtesy, and to all other Heads and Sub-Heads of Departments for their willing co-operation and assistance.

I have the honour to be, Gentlemen,

Your obedient servant,

A. J. MILNE,

Medical Officer of Health.

INDEX.

	PAGE		PAGE
Abattoir	27	Latitude	7
Activated Sludge Plant	37	Leprosy	21
Algae—Yeoville Reservoir	38	Licensed Places	47
Altitude	7	Live Stock Market	27
Ambulance Removals	27	Longitude	7
Analysis of Foods	27		
Analysis of Milk	28	Malignant Disease or Cancer	19
Analysis of Water	35	Maternity	12, 13, 14, 15, 16
Animals Slaughtered	27	Measles	19
Antea Sewage Disposal Works	36	Meat Inspection	27, 28
Ante-Natal Nurses	16	Membraneous Croup	25
Ante-Natal Clinics	16	Meningitis	21
Anthrax	26	Midwives	16
Area	7	Milk Analysis	27, 28
		Milk from Outside Districts	33
Bacteriological Analyses: Swimming Baths	38, 41	Milk Supply	30
Bio-Chemist	35	Miners' Phthisis	18
Birth-rate	7	Mines Sanitation	42
Births	7	Mortality Factors	9
Births, Illegitimate	7	Mortality, Infantile	12
Blown Tinned Foodstuffs	30		
Boreholes	35	Native Housing	44
Bruma Sewage Disposal Works	37	Notifiable Diseases	22
		Notification of Tuberculosis	26
Cancer	19	Nursery Health Classes	15
Causes of Death	9	Nursing Homes	16, 17
Census, 1936	7		
Chemical Analyses: Sewage Disposal Works	39	Ophthalmia Neonatorum	21
Chemical Analyses: Swimming Baths	40	Organic Diseases of Heart	18
Child Welfare	12, 13, 14, 15, 16	Orlando Native Township	41
Climate	7	Outside Dairy Inspection	33
Clinics, Child	13, 14, 15, 16		
Closing Orders	43	Phthisis	18
Coloured Infantile Mortality	12	Phthisis, Miners'	18
Cydna Sewage Disposal Works	37	Plague Prevention	21
		Plans, Inspection of	45
Dairies	30	Pneumonia	18
Death-rates	8, 9, 10, 11	Poliomyelitis	24
Death-rates: Union and Britain	8	Population	7
Deaths	8	Pre-school Children	15
Deaths, Causes of	9, 10, 11	Propaganda, Health	17
Delta Sewage Disposal Works	38	Prosecutions	47
Demolition Orders	43	Puerperal Septicæmia	12, 16, 25
Diarrhœal Diseases	18		
Diphtheria	25	Rat Destruction	24, 25
		Rate	7
Encephalitis Lethargica	26	Rateable Value	7
Enteric Fever	22, 23	Rietfontein Hospital	26
Erysipelas	24	Rock Drill Pneumonia	18
Factors of Mortality	9	Scarlet Fever	25
Fever Hospital	26	Score Cards: Dairies	31
Fish	29	Sewage Disposal	35, 39
Food Inspection	27, 28, 29, 30	Sewerage	35
Foods, Analysis of	27, 28	Silicosis	18
		Slums	42
Gonorrhœal Ophthalmia	21	Slum Elimination	42
		Smallpox	22
Health Inspectors: Record of Inspections	17	Special Treatment Centre	20, 21
Health Propaganda	17	Springkell Sanatorium	26
Health Visitors	15	Staff	4, 5, 6
Heart Disease	18	Swimming Baths	38, 40, 41
Hospital, Isolation	26		
Housing	43	Tinned Foodstuffs	29
Housing Survey	43	Tuberculosis	26
		Tuberculosis Notification	26
Illegitimate Births	7	Typhoid Fever	22, 23
Infantile Mortality	12	Typhus	25
Infantile Paralysis	24		
Infant Welfare	12, 13, 14, 15, 16	Vaal River	35
Infectious Diseases, Notifiable	22	Venereal Disease	20, 21
Influenza	26	Visible Dirt Tests	32, 34
Insanitary Properties	12		
Inspection of Foodstuffs	27	Water Analysis	35
Inspections	46	Water Supply	28, 35, 38
Introduction	2		
Isolation Hospital	26	Yeoville Reservoir	38
Jan Hofmeyr Township	44	Zuurbekom	35
Klipspruit Sewage Farm	36	Zwartkopjes	35

CITY OF JOHANNESBURG.

PUBLIC HEALTH COMMITTEE, 1936-1937:

Councillor L. Leveson (Chairman).
 Councillor F. T. Howarth (Vice-Chairman).
 Councillor C. F. Beckett, M.P.C.
 Councillor Mrs. E. M. Pemberton.
 Councillor D. Penry Roberts.
 Councillor Mrs. S. E. Wordingham.
 Councillor M. A. Zoccola.
 His Worship the Mayor (ex officio).

PUBLIC HEALTH DEPARTMENT.

STAFF.

Administrative and Office—

- 1 Medical Officer of Health: Arthur J. Milne, M.B., B.Ch., D.P.H., D.T.M.
- 1 Deputy Medical Officer of Health: Gordon D. Laing, B.Sc., M.B., Ch.B. (St. And.), D.P.H.
- 1 Assistant Medical Officer of Health (Sanitation Division): J. W. Scott Millar, M.B., Ch.B., D.P.H.
- 1 Assistant Medical Officer of Health (Medical Division): M. Maister, M.B., Ch.B., D.P.H.
- 1 Chief Clerk: E. M. Coetzee, Cert. R.S.I. (S.A.).
- 1 Records Clerk: H. J. Groome.
- 1 Typist Correspondent: Miss E. Oliver.
- 1 Licensing Clerk and Typist: Miss O. V. Joel.
- 1 Assistant Licensing Clerk and Typist: Miss S. Starfield.
- 2 Clerk-Typists: Miss M. K. Green; Miss M. S. Rae.
- 1 Junior Clerk: I. Shar.
- 2 Messengers: L. L. W. Schwartz; H. M. Nieman.

Technical—

- 1 Bio-Chemist: Harold Wilson, B.Sc. (Lond.), A.M.C.I.
- 1 Chief Chemical Assistant: J. A. McLachlan, M.Sc., A.M.I.Chem.E.
- 3 Assistant Chemists: E. G. White, B.Sc.; J. R. Gaillard, B.Sc.; R. J. Welsted, B.Sc.
- 1 Microscopist and Photographer: Miss K. Rosenberg.
- 1 Clerk-Typist: Miss A. M. Stewart.

White Housing Staff—

- 1 Director of Housing: C. J. Crothall, M.I.A., A.M.I.S.E.
- 1 Housing Manageress: Mrs. M. K. Robertson.
- 1 Handyman-Fumigator: B. G. van Pittius.

Inspectoral Staff—

- 1 Chief Health Inspector: G. Bidwell, Cert. R.S.I. (Eng.).
- 3 Plans Inspectors: J. S. Russell, Cert. R.S.I. (S.A.); A. H. Spargo, Cert. R.S.I. (S.A.); J. E. Jarvis, Cert. R.S.I.
- 7 Divisional Health Inspectors:

H. Ballantyne.	W. G. Howarth.	G. M. Parker.
J. A. Bell.	A. H. Maxwell.	R. H. Pope.
V. P. Devitt.		

All Certificated Royal Sanitary Institute (S.A.).

20 District Health Inspectors:

- | | | |
|------------------|------------------|------------------|
| R. C. Alderton. | E. Kenward. | A. Smith. |
| H. H. Alexander. | J. Ledgett. | J. Smith. |
| J. Braden. | C. R. Morrison. | E. F. Squires. |
| H. Dunston. | L. R. Niesewand. | K. G. Webster. |
| C. C. Fowles. | A. Patterson. | A. J. Wilkinson. |
| C. M. Hagley. | J. S. Pitman. | J. Wilson. |
| H. Hunter. | C. P. Quin. | |

All Certificated Royal Sanitary Institute (S.A.).

2 Anti-Rodent Measures Inspectors:

C. D. Adams, Cert. R.S.I.

A. C. Ninow, Cert. R.S.I.

3 Housing Inspectors appointed to deal with Insanitary Properties under the Slums Act, 1934 and Local Government Ordinance:

P. Squires, Cert. R.S.I. (S.A.).

T. Patterson, Cert. R.S.I. (S.A.).

A. C. Wallace, Cert. R.S.I. (S.A.).

2 Food and Drug Inspectors:

I. J. Distiller, Cert. R.S.I. (S.A.).

R. W. G. Grant, Cert. R.S.I. (S.A.).

5 Dairy Inspectors:

W. C. Watson, Cert. R.S.I. (S.A.).

J. W. Forrett, Cert. R.S.I. (S.A.).

W. C. E. Lewis, Cert. R.S.I. (S.A.).

F. Smith, Cert. R.S.I. (S.A.).

D. Smith, Cert. R.S.I. (S.A.).

Infectious Diseases and Disinfecting Station—

1 Infectious Diseases Inspector: A. C. Fraser, Cert. R.S.I. (S.A.).

2 Disinfecting Inspectors: H. J. Hancock and J. A. M. Bain.

1 Disinfecting Engineer: J. P. Jonas. Six native assistants.

Maternity and Child Welfare—

1 Pediatric Officer:

B. G. von B. Melle, M.B., B.Ch. (Oxford), F.R.C.S.E.

1 Assistant Pediatric Officer:

A. E. Strawbaun, M.R.C.S., L.R.C.P.

2 Obstetric and Ante-Natal Officers:

W. H. Maxwell, M.A., M.B., L.R.C.P., F.R.C.S.

F. K. Te Water, M.B., B.Ch., L.R.C.P., F.R.C.S.E.

1 Senior Health Visitor:

C. Morisse.

1 Inspectress of Nursing Homes
and Midwives:

D. T. Fricker.

12 Health Visitors:

(1) E. Ide.

(2) M. Craig.

(3) G. K. Jordan.

(4) E. E. Orn.

(5) L. W. Godfrey.

(6) M. S. Wilson.

(7) R. E. Smith.

(8) D. A. Smith.

(9) A. Marshall.

(10) D. E. B. Bell.

(11) E. M. Hart.

(12) A. Siebert.

All Trained General Nurses and Midwives and all certificated Health Visitors and School Nurses, Royal Sanitary Institute.

Senior Health Visitor and (10):
Cert. R.S.I. Sanitary (Health)
Inspector.(1) Cert. R.S.I. (S.A.), Sanitary
(Health) Inspector and Meat
and other Foods Inspection.

Trained General Nurses and Midwives.

1 Relieving Health Visitor and Ante-Natal Nurse:

A. M. J. Lane, Trained General Nurse and Midwife, and Certificated Health Visitor and School Nurse, Royal Sanitary Institute.

4 Ante-Natal Nurses:

(1) I. D. Kirkman, Trained General Nurse and Midwife, Certificated Health Visitor and School Nurse.

(2)	} Temporary Officials	{	Trained General Nurses and Midwives.
(3)			
(4)			

1 Psychiatrist: F. F. du Toit, M.B., Ch.B.

1 Senior Supervisor, Nursery Health Classes: Miss E. Brosius.

6 Supervisors, Nursery Health Classes, and 6 Assistants.

Fever Hospital—

- 1 Physician-in-charge: P. Bayer, M.D., Ch.B., M.R.C.P.
- 1 Resident Medical Officer.

Nursing Staff:

Permanent: 1 Matron, 5 Sisters.

Temporary: 3 Staff Nurses, 17 Probationers.

Administrative: 1 Clerk.

1 Typist and Switchboard Attendant.

General: 1 Handyman, 1 Gardener, 1 Cook, 1 Kitchenmaid, 1 Sewingmaid.
2 Housemaids, 3 Wardmaids, 23 Natives.

Veneral Diseases Clinic—

- 1 Director: H. Gluckman, M.R.C.S. (Eng.), L.R.C.P. (Lond.).
- 1 Clinic Orderly (Male).
- 2 Nursing Sisters.

Plague Rat-catching Staff—

- 1 Senior Rodent Inspector: R. J. Fox.
- 1 Junior Rodent Inspector: N. J. Smith.
- 16 Rat-catchers.
- 19 Ratcatching Youths.

Report, 1st July, 1936—30th June, 1937.

CLIMATE AND RATEABLE VALUE.

Latitude.—26 degrees 11 minutes 44 seconds South.

Longitude.—1 hour 52 minutes 10 seconds East.

Mean Altitude.—5,850 feet.

Climate.—The days are bright and warm, the nights cool, and in winter often very cold. The following averages of Johannesburg records for thirty-three years are kindly supplied by Dr. H. E. Wood, Union Astronomer. Temperature, average maximum 70·2 degrees F., average minimum 49·6 degrees F.; highest recorded 93·6 degrees F. on 21st December, 1926, lowest recorded 20·8 degrees F. on 23rd July, 1926. Annual rainfall, 29·58 inches on 95 days. Relative humidity, 59·5 per cent. (average of sixteen years). Bright sunshine, 8·9 hours daily.

Area.—The area of the City of Johannesburg is 53,478 acres, the extreme length $11\frac{1}{2}$ miles, extreme breadth $9\frac{1}{2}$ miles, extent of perimeter $41\frac{1}{2}$ miles.

Annual Rateable Value.—As assessed in accordance with Ordinance 13 of 1928, and representing “the full and fair price or sum which the same would realise if brought at the time of valuation to voluntary sale,” was at 30th June, 1937, £87,499,734.

The rate for 1936-37 was 5d. in the £1 on land. Rate produced £598,834; Special Road Rate, 1d. in the £1 on land, produced £107,453. Total, £706,287.

In 1935-36 the valuation was: Land, £27,976,408; Improvements, £53,360,691.

POPULATION.

			(Census May, 1936).	(Estimated 30th June, 1937).
Europeans	...	...	252,718	262,300
Natives	...	...	191,032	197,400
Eurafricans	...	...	21,366	22,070
Asiatics	...	...	9,918	10,270
			<u>475,034</u>	<u>492,040</u>

BIRTHS.

From 1st July, 1936, to 30th June, 1937, the number of white births registered was 6,653 (3,483 males, 3,170 females), as compared with 5,100 and 5,922 in 1934-35 and 1935-36 respectively.

The *white birth-rate* was 25·36 per 1,000 for 1936-37, as compared with 21·5 in 1934-35 and 23·63 in 1935-36.

For England and Wales in 1936 the birth-rate was 14·8, in Pretoria 23·94, in Bloemfontein 19·42, in Capetown 17·02, in Pietermaritzburg 17·69, in East London 17·2, and in Durban 18·78 for 1936-37.

White Illegitimate Births.—These numbered 152, and constituted 2·28 per cent. of all births, as against 5·42 in Capetown, 2·94 in Pretoria, 2·39 in Durban, 1·88 in Pietermaritzburg, and 1·49 in Bloemfontein in 1936-37.

The white birth-rate remains at a remarkably high level for a large industrial city, whilst the percentage of illegitimate births is also remarkably low for such a city.

The native, asiatic and coloured births registered during 1936-37 numbered 2,455 (1,096 native, 860 coloured, and 499 asiatics), as compared with 2,160 in 1934-35, and 2,171 in 1935-36. This number represents a birth-rate of 10·68. It is not permissible, however, to draw a comparison between the birth-rate of Europeans and non-Europeans, because firstly the registration of births of non-Europeans is known to be very incomplete, and secondly the ratio of females to males in the non-European population is very much lower than in the European population. In the one case it is as 1 : 2·93 and in the other as 1 : 1·01 (1936 Census).

DEATHS AND DEATH RATES.

The deaths herein referred to are those of persons who died within the extended Municipal Area as defined by Proclamations 13 of 1902 and 46 of 1903, corrected for Inward and Outward Transfers:—

DEATHS.

Year	Whites	Natives	Eurafricans	Asiatics	All Persons
1927-28	1,858	2,696	440	137	5,131
1928-29	1,989	2,795	304	143	5,231
1929-30	1,942	3,115	339	172	5,568
1930-31	2,038	3,349	357	181	5,925
1931-32	2,070	3,309	356	183	5,918
1932-33	2,181	3,178	354	210	5,923
1933-34	2,264	3,872	380	194	6,710
1934-35	2,345	3,478	401	187	6,411
1935-36	2,731	3,281	567	222	6,801
1936-37	2,686	3,181	513	207	6,587

DEATH-RATES.

DEATH-RATES (excluding non-residents)	White		Natives	Eur- africans	Asiatics	All Persons
	Gross	*Corrected for Age and Sex distrib.				
1927-28	10.50	—	18.52	31.16	21.39	14.96
1928-29	11.05	—	19.07	17.88	20.42	14.92
1929-30	10.67	—	21.62	18.83	22.93	15.72
1930-31	10.22	—	22.32	17.85	22.62	15.70
1931-32	10.01	—	21.84	17.45	22.60	15.35
1932-33	10.22	*10.83	20.55	25.28	21.00	15.11
1933-34	10.19	*10.80	23.32	26.48	18.74	16.25
1934-35	9.77	*10.35	19.03	27.27	17.64	14.31
1935-36	10.88	—	17.17	27.00	22.63	14.39
1936-37	10.24	—	16.11	23.24	20.15	13.38

* Factor for correction 1.06.

DEATH-RATE IN BRITISH AND SOUTH AFRICAN CITIES.

Appended, for purposes of comparison, are particulars as to the "Death-rate per 1,000 from All Causes," in England and Wales, and in the large cities and towns of the Union:—

Greater London (i.e., Metro- politan and City Police Districts)				JOHANNESBURG—			
11.0 (1936)				White	...	...	10.24 (1936-37)
12.1 "				Natives	...	...	16.11 "
8.79 (1936-37)				Eurafricans	...	...	23.24 "
7.52 "				Asiatics	...	...	20.15 "
9.68 "				All Persons	...	...	13.38 "
8.02 "							
8.56 "							

Except in regard to South African towns, these figures are taken from the Statistical Review of the Registrar-General for England and Wales, 1936.

The European death-rate is nearly 1 per 1,000 lower than that of Greater London, and almost 2 per 1,000 lower than that of England and Wales, and taking into account the *very large industrial expansion of the City in recent years* may be regarded as satisfactory. The native death-rate is a good deal, i.e. 1 per 1,000 lower than it has ever been, while the death-rate for "all persons" is lower than it has been for the past nineteen years.

CAUSES OF DEATH.

The causes of and ages at death and the local distribution are analysed in the usual Tables for "Whites," "Natives," "Eurafricans" and "Asiatics" respectively. For reasons of economy, these voluminous tables have not, however, been printed, but are available for inspection.

FACTORS OF MORTALITY, 1934-35, 1935-36 AND 1936-37.

DISEASE		1934-35		1935-36		1936-37		DISEASE		1934-35		1935-36		1936-37	
		Deaths	Rates	Deaths	Rates	Deaths	Rates			Deaths	Rates	Deaths	Rates	Deaths	Rates
Enteric Fever ...	W.	16	0·06	16	0·06	15	0·057	Diseases of the Heart ...	W.	384	1·60	411	1·63	528	2·01
	N.	60	0·33	67	0·35	40	0·20		N.	188	1·02	144	0·75	222	1·12
	E.	3	0·20	2	0·09	4	0·22		E.	44	2·99	39	1·85	69	3·12
	A.	1	0·09	1	0·10	3	0·29		A.	27	2·84	23	2·34	21	2·04
Measles ...	W.	12	0·05	5	0·02	1	0·003	Acute Bronchitis ...	W.	13	0·05	25	0·099	31	0·11
	N.	4	0·02	7	0·03	11	0·05		N.	151	0·81	125	0·65	100	0·50
	E.	1	0·06	3	0·14	—	—		E.	17	1·15	22	1·04	18	0·81
	A.	1	0·09	2	0·20	1	0·09		A.	2	1·13	15	1·53	11	1·07
Scarlet Fever ...	W.	5	0·02	7	0·027	2	0·007	Chronic Bronchitis ...	W.	70	0·29	48	0·19	27	0·10
	N.	—	—	—	—	—	—		N.	50	0·26	15	0·07	11	0·05
	E.	—	—	1	0·047	—	—		E.	14	0·95	4	0·19	8	0·44
	A.	—	—	—	—	—	—		A.	8	0·75	7	0·71	5	0·48
Whooping Cough ...	W.	6	0·02	11	0·04	26	0·09	Pneumonia ...	W.	356	1·48	395	1·65	350	1·33
	N.	6	0·03	7	0·037	20	0·10		N.	1,078	5·90	973	5·091	921	4·66
	E.	1	0·06	4	0·19	4	0·22		E.	63	4·28	156	7·42	124	5·61
	A.	—	—	—	—	3	0·29		A.	51	4·81	66	6·72	61	5·93
Diphtheria and Croup ...	W.	23	0·09	14	0·05	13	0·049	Silicosis ...	W.	27	0·11	41	0·16	30	0·11
	N.	2	0·01	1	0·005	2	0·01		N.	6	0·03	10	0·05	4	0·02
	E.	—	—	2	0·09	2	0·11		E.	2	0·13	5	0·24	2	0·11
	A.	1	0·09	—	—	—	—		A.	—	—	1	0·10	—	—
Influenza ...	W.	30	0·12	135	0·53	46	0·102	Other Respiratory Diseases ...	W.	26	0·10	74	0·29	32	0·12
	N.	21	0·12	37	0·19	36	0·18		N.	33	0·17	43	0·22	21	0·10
	E.	3	0·20	6	0·28	5	0·22		E.	1	0·06	15	0·71	8	0·44
	A.	1	0·09	6	0·61	1	0·09		A.	3	0·28	9	0·91	3	0·29
Tuberculosis of Lungs ...	W.	62	0·25	60	0·23	43	0·164	Diarrhoea and Enteritis ...	W.	101	0·22	130	0·51	114	0·43
	N.	209	1·17	220	1·15	209	1·05		N.	540	2·95	537	2·81	474	2·40
	E.	33	2·14	43	2·04	42	2·40		E.	60	4·08	76	3·61	68	3·08
	A.	6	0·86	10	1·02	12	1·26		A.	29	2·73	24	2·44	20	1·94
Other Forms of Tuberculosis...	W.	5	0·02	7	0·027	14	0·053	Acute Nephritis and Bright's Disease ...	W.	127	0·52	110	0·43	95	0·36
	N.	35	0·19	45	0·23	43	0·21		N.	75	0·41	62	0·32	33	0·16
	E.	4	0·17	5	0·23	6	0·36		E.	3	0·20	9	0·43	11	0·49
	A.	2	0·18	2	0·20	3	0·19		A.	3	0·28	1	0·10	4	0·38
Cancer ...	W.	229	0·99	248	0·99	262	0·99	Congenital Malformation Premature & Early Infancy	W.	161	0·67	167	0·66	171	0·65
	N.	26	0·14	25	0·13	31	0·15		N.	224	1·22	172	0·90	138	0·69
	E.	10	0·68	12	0·37	13	0·58		E.	39	2·65	45	2·14	27	1·22
	A.	8	0·75	2	0·20	6	0·59		A.	11	1·03	8	0·81	15	1·46
Meningitis ..	W.	40	0·16	19	0·07	23	0·08	Violent Deaths	W.	225	0·97	146	0·58	181	0·69
	N.	122	0·66	31	0·16	32	0·16		N.	368	2·01	365	1·91	434	2·19
	E.	3	0·20	2	0·09	3	0·13		E.	13	0·88	12	0·37	25	1·13
	A.	3	0·28	3	0·30	—	—		A.	1	0·09	7	0·71	4	0·38
Cerebral Hæmorrhage and Softening	W.	83	0·34	77	0·30	52	0·019								
	N.	10	0·05	14	0·07	12	0·06								
	E.	8	0·68	9	0·42	12	0·22								
	A.	3	0·28	1	0·10	4	0·38								

The following observations are suggested by an inspection of this table:—

(1) That during 1936-37 the chief factors of mortality were:—

(a) *For Whites.*—Heart diseases (528), pneumonia (350), cancer (262), violent deaths (181), premature birth and early infancy (171), diarrhoea and

enteritis (114), nephritis (95), cerebral hæmorrhage (52), influenza (46), tuberculosis of lungs (43), other respiratory diseases (32), acute bronchitis (31), silicosis (30), chronic bronchitis (27), whooping cough (26), meningitis (23), enteric (15), other forms of tuberculosis (14), diphtheria (13).

(b) *For Natives*.—Pneumonia (921), diarrhœa and enteritis (474), violent deaths (434), heart diseases (222), tuberculosis of lungs (209), premature birth and early infancy (138), acute bronchitis (100), other forms of tuberculosis (43), enteric (40), influenza (36), nephritis (33), meningitis (32), cancer (31), other respiratory diseases (21), whooping cough (20), cerebral hæmorrhage (12), measles (11), chronic bronchitis (11).

(c) *For Eurafrians*.—Pneumonia (124), heart diseases (69), diarrhœa (68), tuberculosis of lungs (42), premature birth and early infancy (27), violent deaths (25), acute bronchitis (18), cancer (13), nephritis (11), other respiratory diseases (8), chronic bronchitis (8), other forms of tuberculosis (6).

(d) *For Asiatics*.—Pneumonia (61), heart diseases (21), diarrhœa (20), premature birth and early infancy (15), tuberculosis of lungs (12), acute bronchitis (11), cancer (6), chronic bronchitis (5).

(2) That the comparison with the two previous years is as follows:—

(a) *As regards Whites*, the principal *increases* are in respect of heart diseases, 528 as compared with 411 in 1935-36 and 384 in 1934-35; violent deaths, 181 as compared with 146 in 1935-36 and 225 in 1934-35; whooping cough, 26 as compared with 11 in 1935-36 and 6 in 1934-35; and cancer, 262 as compared with 248 in 1935-36 and 229 in 1934-35. The principal *decreases* are in respect of influenza, 46 as compared with 135 in 1935-36 and 30 in 1934-35; pneumonia, 350 as compared with 395 in 1935-36 and 356 in 1934-35; other respiratory diseases, 32 as compared with 74 in 1935-36 and 26 in 1934-35; cerebral hæmorrhage, 52 as compared with 77 in 1935-36 and 83 in 1934-35; chronic bronchitis, 27 as compared with 48 in 1935-36 and 70 in 1934-35; tuberculosis of lungs, 43 as compared with 60 in 1935-36 and 62 in 1934-35; diarrhœa and enteritis, 114 as compared with 130 in 1935-36 and 101 in 1934-35; nephritis, 95 as compared with 110 in 1935-36 and 127 in 1934-35; and silicosis, 30 as compared with 41 in 1935-36 and 27 in 1934-35.

(b) *As regards Natives*, the principal *increases* are in respect of heart diseases, 222 as compared with 144 in 1935-36 and 188 in 1934-35; violent deaths, 434 as compared with 365 in 1935-36 and 368 in 1934-35; and whooping cough, 20 as compared with 7 in 1935-36 and 6 in 1934-35. The principal *decreases* are in respect of diarrhœa and enteritis, 474 as compared with 537 in 1935-36 and 540 in 1934-35; pneumonia, 921 as compared with 972 in 1935-36 and 1,078 in 1934-35; premature birth and early infancy, 138 as compared with 172 in 1935-36 and 224 in 1934-35; nephritis, 33 as compared with 62 in 1935-36 and 75 in 1934-35; enteric fever, 40 as compared with 67 in 1935-36 and 60 in 1934-35; acute bronchitis, 100 as compared with 125 in 1935-36 and 151 in 1934-35; other respiratory diseases, 21 as compared with 43 in 1935-36 and 33 in 1934-35; and tuberculosis of lungs, 209 as compared with 220 in 1935-36 and 209 in 1934-35.

(c) *As regards Eurafrians*, the principal *increases* are in respect of heart diseases, 69 as compared with 30 in 1935-36 and 44 in 1934-35; and violent deaths, 25 as compared with 12 in 1935-36 and 13 in 1934-35. The principal *decreases* are in respect of pneumonia, 124 as compared with 156 in 1935-36 and 63 in 1934-35; and premature birth and early infancy, 27 as compared with 45 in 1935-36 and 39 in 1934-35.

(d) *As regards Asiatics* there is no important factor in comparison with the two previous years.

It is interesting to note that in all races the deaths from acute lung conditions are in this year, a less if still a serious factor. Though it is true that the total European deaths attributable to lung conditions have decreased by 102, deaths

from heart conditions show an increase of 117. One might think that by this increase in the deaths from heart diseases that we are in the throes of an epidemic of heart disease. I prefer to think otherwise. After all in both these groups of diseases the ultimate verdict is in all cases "Asphyxia." In other words, some physicians certify "Heart" and others "Lung," but actually in many cases they mean the same thing. To illustrate, one may be permitted to tabulated deaths from "Heart" and "Lung" in this year and the preceding year. The figures are:—

			1935-36.		1936-37.
Heart Diseases ...	...	...	411	...	528
Pneumonia ...	...	...	395	...	350
Other Respiratory Diseases		...	74	...	32
Acute Bronchitis	...	...	25	...	31
Chronic Bronchitis	...	...	48	...	27
Total ...			953	...	968

These figures are to all intents and purposes identical, and to my mind, indicate no alleviation in those climatic conditions—widely variable daily temperatures—which are largely responsible for that portion—heart and lung diseases—of our death-rate which is mainly non-preventable.

The only other item in these statistics which calls for attention is the number of violent deaths.

From the figures submitted there were amongst Whites and Natives 511 deaths in 1935-36 and 615 deaths in 1936-37, i.e. an increase in one year of 104 deaths. Such deaths can only be labelled as "Suicides," "Homicides" and "Accidentals." There is no indication of increase in either "Suicides" or "Homicides" and so the increase (though I have no actual figures to prove or disprove) may reasonably be placed largely in the category of "Accidentals." How many of the "Accidentals" may be placed against the motor vehicle is not known, but it must be considerable. From many years of experience of traffic conditions in Johannesburg, both as pedestrian and motorist, I am inclined to think that in 1936-37 something in the neighbourhood of 100 lives might have been conserved had the man at the wheel been more considerate, more courteous and more concerned with the safety of his passengers, his fellow pedestrians and himself, and had the pedestrian been also more considerate, more versed in traffic sense and less intent on suicide.

INFANTILE MORTALITY, MATERNAL MORTALITY AND MATERNITY AND CHILD WELFARE MEASURES.

Infantile Mortality, i.e. deaths of infants under one year per each 1,000 births registered, was: Whites 64·63, Eurafrians 182·56, and Asiatics 180·36.

The following table shows the white infantile mortality rate in recent years:—

1927-28	1928-29	1929-30	1930-31	1931-32	1932-33	1933-34	1934-35	1935-36	1936-37
83·39	72·77	78·62	79·08	76·61	80·04	82·43	69·21	74·13	64·63

This table which shows a decrease from the preceding year of almost ten per thousand births and which is much the lowest figure in the history of this City, can only be a matter for congratulation. That it has eventuated despite the large influx of population from the platteland of people who are little cognisant of mothercraft methods and their proper application, indicates that the Council's Maternal and Child welfare measures, built up with considerable care and thought and at no inconsiderable cost, are proving a very large insurance against child loss and child ill-health.

With the advantages which will accrue from the extension of the Council's schemes for Maternal and Child Welfare, combined with the Council's Sub-economic Housing schemes, one may be permitted to look forward with some degree of certainty to a year in the near future when the infantile mortality rate of the City will be without any reproach.

MATERNAL MORTALITY.

	Puerperal Sepsis per 1,000 Births		Other Causes per 1,000 Births		All Causes per 1,000 Births	
	Joh'burg	E. & W.	Joh'burg	E. & W.	Joh'burg	E. & W.
1927-28	3·33	1·56 (1927)	1·90	2·55	5·23	4·11
1928-29	1·49	1·79 (1928)	2·35	2·63	3·85	4·42
1929-30	1·07	1·80 (1929)	2·77	2·53	3·85	4·33
1930-31	1·42	1·92 (1930)	1·01	2·48	2·44	4·40
1931-32	1·05	1·66 (1931)	1·89	2·45	2·94	4·11
1932-33	1·55	1·61 (1932)	0·22	2·60	1·77	4·21
1933-34	3·65	1·82 (1933)	4·33	2·68	7·99	4·51
1934-35	2·15	1·95 (1934)	1·96	2·47	4·11	4·41
1935-36	2·70	1·61 (1935)	3·55	2·32	6·25	3·94
1936-37	1·05	1·34 (1936)	3·00	2·31	4·05	3·65

The Maternal Mortality rate in this year on account of Puerperal Sepsis is the lowest in the last decade and is a good deal lower than this rate in " England and Wales." The comparison of " Other Causes " betwixt Johannesburg and " England and Wales " is comparatively insignificant and goes to show that Johannesburg is just as much alive to pre-natal and maternal care as is " England and Wales." So far as " All Causes " are concerned, Johannesburg can claim a near percentage to " England and Wales."

MATERNAL AND CHILD WELFARE MEASURES.

1.—GENERAL SUMMARY—EUROPEANS.

Year	Number of		Mothers referred to		Infants sent to Children's Hospital and O.P.D.	Infants Reported to Children's Aid Society	Mothers Attendances at		Cases Referred to Pediatric Officer	Attendances at Ante-Natal Clinic.	Assisted at Clinics
	First Visits	Re-visits	Maternity Hospital	Ante-Natal Nurse			Welfare Clinics	Health Visitors' Office			
1935-36 ...	4,124	8,784	348	385	237	33	43,654	286	1,351	2,575	11,891
1936-37 ...	5,557	13,876	246	365	262	48	49,117	123	1,480	3,015	12,179

2.—BIRTHS INVESTIGATED.

2.—BIRTHS INVESTIGATED.																	
Year	Legitimate : 4,099		Illegitimate : 57		Full Time : 3,475		Premature: 117		Stillborn : 53								
1935-36 ...	...	...	...	...	...	...	...	...	...	...	...	...					
1936-37 ...	...	...	...	...	...	...	...	...	...	...	...	...					
Year	Attended by			Condition of Mother			Condition of Infant				Condition of Home						
	Doctor	Midwife		Good	Fair	Poor	Sick	Good	Fair	Poor	Sick	Dead	Good	Fair	Bad	Clean	Dirty
		Trained	Untrained														
1935-36 ...	1,215	3,038	1,065	3,935	113	14	41	3,942	59	11	14	130	3,464	554	37	3,978	53
1936-37 ...	2,289	4,434	1,047	5,314	191	39	34	5,319	93	18	13	185	4,951	570	55	3,807	74

3.—METHODS OF FEEDING.

Year	Breast Milk	Cow's Milk	Tinned Milk	Breast and Complemental	Other Foods	Feeding Bottles				Comforter Used
						Pattern		Condition		
						Good	Bad	Good	Bad	
1935-36 ...	3,504	162	50	248	59	224	3	165	4	341
1936-37 ...	4,605	218	74	414	141	500	—	497	3	504

MATERNAL AND CHILD WELFARE MEASURES.

4.—NATIVE TOWNSHIPS.

First Visits		Re-visits	Welfare Clinics and Office Attendances	Feeding		Comforter Used
				Breast	Other	
Health Visitors 1	Health Visitors 3,179	Native Nurses 12,783	7,114	1,182	100	201
Native Nurses 1,332	Native Nurses 12,783					

5.—EURAFRICANS.

First Visits	Re-visits	Legitimate	Illegitimate	Full Time	Premature.	Attended by			
						Trained Midwife	Untrained Midwife	Friends	No One
						166	450	46	9
679	1,481	572	108	674	6				

6.—ASIATICS.

First Visits	Re-visits	Legitimate	Illegitimate	Full Time	Premature	Attended by			
						Trained Midwife	Untrained Midwife	Friends	No One
						220	336	4	—
561	2,595	549	14	555	8				

Breast Feeding.—Whilst the percentage of breast-fed infants has fallen slightly, viz., from 84·3 per cent. in 1935-36 to 81·8 per cent. in the year under review, the percentage is still high. The decrease, if it can be attributed to any particular factor, might readily be ascribed to the importunities of artificial food merchants and the passivity of many medical men, who ought to know better, and possibly to the necessities of poor mothers who are increasingly becoming wage earners. It is most certainly not due to the teachings of the Welfare Staff of the Department, who consistently not only advocate but do their utmost to ensure breast feeding.

STAFF AND CLINICS.

The Council now employs one Senior Health Visitor, nine Health Visitors for European post-natal clinics, one Health Visitor for native clinics (with ten native qualified midwives), one Health Visitor for coloured clinics, and one Health Visitor for an Asiatic clinic, plus one Relieving Health Visitor. Expenditure on pasteurised milk, acidophilus milk and accessory foods for infants and mothers keeps on increasing and now amounts to the formidable total of approximately £4,000 per annum.

So far as the Ante-Natal Clinics held twice weekly at the New Market Clinic Building are concerned, it is interesting to note that the attendances continue to increase, viz., 3,015 in 1936-37 as against 2,575 in 1935-36. In this connection your M.O.H. desires to record his appreciation of the services of the Council's Specialist Obstetric Officers, Dr. W. H. Maxwell and Dr. F. K. te Water, and also of the services of your Pediatric Officers, Dr. B. G. v. B. Melle and Dr. A. E. Strawbaun at your Post-Natal Clinics.

The nett position to-day is that the Council provides weekly:—

1. Six Post-Natal Clinics for Europeans.
2. Four Post-Natal Clinics for Natives.
3. Two Post-Natal Clinics for Coloured Persons.
4. One Post-Natal Clinic for Asiatics.
5. Two Ante-Natal Clinics for Europeans.

Finally, your M.O.H. desires to record his appreciation of the loyal services of all members of this branch of his Department.

Pre-school Children.—Six Nursery Health classes were conducted by Miss Brosius, the Senior Supervisor, and her assistants in Brixton (to January, 1937), Vrededorp, Jeppes, Ophirton, Newlands, Fordsburg and Turffontein (from April, 1937). These classes were well attended and an interesting development is the holding of instructional classes for the mothers of the pre-school children attending the nursery classes. The mothers receive valuable advice from the Supervisor in the up-bringing of their pre-school children and it is gratifying to note that the mothers are extraordinarily keen to learn and put in practice the advice given. All the children are regularly examined by the Pediatric Officer and their mental condition and development is attended to by the Council's Psychiatrist (Dr. F. F. du Toit). The Psychiatrist also gives a course of instruction in Psychology and Psychiatry to the Supervisors and Assistant Supervisors of these classes. The children attending these classes, all of whom are the children of indigent parents and between two and six years of age, are given simple health exercises and are instructed in such simple hygienic measures as head and body cleanliness, teeth cleaning, etc., etc., interspersed with occupational instruction, games, physical exercises and general kindergarten. They receive a daily ration of one-third of a pint of pasteurised milk and are weighed and have their body measurements taken at regular and frequent intervals.

Dental care of pre-school children is a particular object. All pre-school children attending the Nursery Health Classes are taken by the Supervisor to the Dental Section of the School Clinic. The sight of these toddlers going gaily in our motor-van with the Supervisor to the School Clinic, and at the Clinic opening their small mouths to the sympathetic dental officers without the smallest qualm is a spectacle which requires to be seen to be realised and is a tribute to their faith in their Supervisors and the kindness of the dental officers.

Since April, 1937, the Provincial Education Department has subsidised the Council's Nursery Health Classes to the extent of £3 per pupil per annum with a limit of subsidy of 50 per cent. of the wages of the teaching (supervising) staff. It is only proper that the Provincial Education Department should so subsidise, especially as Principals of schools whereat new scholars are received at school age are fairly unanimous in their opinion that it is quite easy amongst entrants to recognise the Nursery Health Classes entrants from their physical conditions and mental outlook. The subsidy amounts approximately to £700 per annum.

Ante-Natal Nurses.—The Council employs four Ante-Natal Nurses, stationed at two Centres—Western and Central. These Ante-Natal Nurses are qualified general nurses and midwives. They extend ante-natal care to expectant mothers in the homes, shepherd these mothers to the Ante-Natal Clinics, arrange for their confinement in the Queen Victoria Maternity Hospital when desired, or themselves conduct the confinements in the homes. This branch of the work is extending rapidly, and has become a great boon to poor expectant mothers, who in the past have had to submit in their confinements to the tender mercies of the crude and unqualified midwife.

Ante-Natal Clinics.—Two Ante-Natal Clinics are conducted on Tuesday and Friday afternoons at the New Market Buildings. The attendance, shown in the General Summary above, continues to increase. During the year the Ante-Natal Nurses attended 337 confinements, paid 3,487 post-confinement visits, and made 2,935 visits to expectant mothers in their homes prior to their confinements. Students of the Witwatersrand University attend both the Ante-Natal Clinics and the confinements conducted in the homes by the Ante-Natal Nurses. Such attendance is an integral part of the medical curriculum, and affords facilities to medical students, which they are increasingly taking advantage of. These facilities are also extended to pupil midwives receiving their training at the Queen Victoria Hospital. Pupil midwives are availing themselves of the facilities afforded with enthusiasm.

SUPERVISION OF PRACTISING MIDWIVES AND NURSING HOMES.

The newly created position of Inspectress of Nursing Homes and Midwives was filled immediately prior to the year under review, and the improvements effected have fully justified the appointment of this official.

(a) *Administration of Regulations regarding Persons Practising Midwifery:*

The number of midwives listed in accordance with the above-quoted regulations is as follows:—

		1st July, 1936.	Removed from list during year.	Listed during year.	30th June, 1937.
European, certificated ...	...	208	54	98	252
European, uncertificated ...	...	85	40	15	60
Non-European, certificated ...	...	23	7	3	19
Non-European, uncertificated ...	...	41	7	6	40
		357	108	122	371

The registers of all listed midwives and the midwifery bags of all uncertificated midwives were examined each quarter, and the midwifery bags of certificated listed midwives were examined in April, 1937. At the time of these inspections every effort was made to ensure that practising midwives knew and understood the regulations regarding persons practising midwifery.

All notified cases of Puerperal Sepsis (103) were investigated and disinfection of midwives and their appliances was carried out in all such cases. Throat swabs were taken of all nurses, etc., in contact with Puerperal Sepsis cases, and where the result of such swabs indicated the presence of Haemolytic Streptococci, the necessary action was taken to prevent any spread of infection until negative swabs had been obtained.

During the year three successful prosecutions were instituted for non-notification of sore eyes.

(b) *Nursing Homes.*

At the commencement of the period under review there were forty private hospitals and nursing homes, and at the 30th June, 1937, there were thirty-seven, nine having closed down and six new institutions having opened up.

During the year the old buildings of the Joubert Park and Lady Dudley Private Hospitals were completely demolished and new modern buildings erected, and the Norman Nursing Home was reconstructed and modernised in addition to the erection of a new block. In the case of fifteen other institutions, considerable structural alterations and additions were effected, and it is pleasing to state that the Secretary for Public Health has placed on record the marked improvement in the conditions of the private hospitals and nursing homes in Johannesburg, and it is desired to express to the owners and proprietors of these institutions appreciation of their cordial co-operation in this direction. All plans submitted for alterations and additions in nursing homes were carefully examined, and frequent consultations took place with owners, architects and builders, with the aforementioned satisfactory results.

HEALTH PROPAGANDA.

The Department's activities on propaganda lines were continued during the year. The principal propaganda measures were:—

- (a) Distribution of leaflets on health subjects.
- (b) Preparation of new original posters illustrating various health subjects.
- (c) Distribution of booklets on health matters. These publications include "Facts about Ourselves," "Care of Mother and Child," "Your Health, Look into it" (a booklet dealing with every aspect of public health), "Prevention and Destruction of Rats and Mice," "The House or Typhoid Fly." It may be mentioned that by arrangement with the Registrar of Births and Deaths, a copy of the booklet "Care of Mother and Child" is handed to every person registering a birth.
- (d) Advertisements in the local papers at some cost, illustrating various public health matters. More especially was public attention called to clean milk production by means of illustrations, and the Press were good enough to elaborate by appropriate articles. Indeed, the Press have assisted greatly in this connection.
- (e) Health Exhibit (Empire Exhibition, 1936, Johannesburg).—A Health Exhibit was staged at the Empire Exhibition held in Johannesburg in 1936, and comprised Plague Prevention, Rodent, Fly and Mosquito destruction, Housing Schemes and Slum clearance. It was open from 15th September, 1936, to 16th January, 1937, was in the charge of competent technical demonstrators and excited considerable attention from the large number of visitors to the Exhibition.

PNEUMONIA.

The death-rates per 1,000 from this disease are as follows:—

	Whites	Natives	Eurafricans	Asiatics	England and Wales
1927-28	1.47	5.09	4.46	5.30	0.94 (1927)
1928-29	1.50	5.48	3.29	7.00	0.78 (1928)
1929-30	1.74	7.03	4.77	7.66	1.10 (1929)
1930-31	1.39	7.03	4.55	5.75	0.69 (1930)
1931-32	1.55	7.16	4.60	6.17	0.80 (1931)
1932-33	1.42	6.26	5.92	6.20	0.73 (1932)
1933-34	1.65	6.81	6.20	3.86	0.74 (1933)
1934-35	1.48	5.90	4.28	4.81	0.71 (1934)
1935-36	1.65	5.09	7.42	6.72	0.66 (1935)
1936-37	1.33	4.66	5.61	5.93	0.69 (1936)

MINERS' PHTHISIS, ROCK DRILL PNEUMONIA OR SILICOSIS.

36 deaths (30 Whites, 4 Natives and 2 Eurafricans) were registered during 1936-37, as compared with 57 (41 Whites, 10 Natives, 5 Eurafricans and 1 Asiatic), and 35 (27 Whites, 6 Natives and 2 Eurafricans) in 1935-36 and 1934-35 respectively.

ORGANIC DISEASES OF THE HEART.

These heart affections include pericarditis, endocarditis, angina pectoris, valvular disease and other diseases of the circulatory system. The deaths recorded during the year 1st July, 1936, to 30th June, 1937, were 528 for Whites, as compared with 384 and 411 for the two previous years. This figure represents a rate of 2.01 per 1,000 as against 3.777 for England and Wales in 1936. For Natives the rate was 1.12; for Eurafricans, 3.12; and for Asiatics, 2.04.

DIARRHOEAL DISEASES.

The following are the mortality rates per 1,000 of population for the period under notice:—

	Whites	Natives	Eurafricans	Asiatics	England and Wales
1927-28	0.59	2.32	4.67	2.96	0.15 (1927)
1928-29	0.63	2.52	3.00	1.42	0.16 (1928)
1929-30	0.65	3.33	2.72	2.53	0.17 (1929)
1930-31	0.78	4.10	3.10	3.87	0.13 (1930)
1931-32	0.49	3.22	2.59	3.20	0.13 (1931)
1932-33	0.68	3.39	4.07	3.10	0.14 (1932)
1933-34	0.56	4.65	4.25	3.67	0.13 (1933)
1934-35	0.42	2.95	4.08	2.73	0.12 (1934)
1935-36	0.51	2.81	3.61	2.44	0.12 (1935)
1936-37	0.43	2.40	3.08	1.94	0.12 (1936)

These rates show a gratifying decrease.

MALIGNANT DISEASE OR CANCER.

During 1936-7, the deaths from cancer numbered 296 Whites (including 34 non-residents) 52 Natives (including 21 non-residents), 13 Eurafrians and 6 Asiatics, as compared with 285 Whites (including 37 non-residents), 37 Natives (including 12 non-residents), 14 Eurafrians and 2 Asiatics in 1935-36 and 277 Whites (including 48 non-residents), 40 Natives (including 14 non-residents), 10 Eurafrians and 8 Asiatics in 1934-35.

Of the 296 Whites, 162 were males and 134 females, and 243 were over the age of 35 years, the rate being 0·99 for the last three years as compared with 1·625 per 1,000 for England and Wales in 1936.

In the following table is set forth the part of the body affected:—

	Whites			Natives			Eurafrians			Asiatics		
	1934-35	1935-36	1936-37	1934-35	1935-36	1936-37	1934-35	1935-36	1936-37	1934-35	1935-36	1936-37
Stomach	111	59	85	9	1	6	4	1	3	4	1	1
Womb and Ovaries	37	34	34	9	1	8	1	5	4	2	1	—
Breast	22	26	24	2	—	2	—	1	1	—	—	1
Liver	12	20	19	17	17	19	2	4	1	—	—	1
Neck and Throat ...	8	19	11	2	1	2	—	1	—	1	—	1
Mouth and Jaw ...	3	7	3	1	1	1	—	—	—	—	—	—
Tongue	5	5	4	—	1	1	—	—	1	—	—	—
Lungs	15	9	16	1	2	3	—	1	—	—	—	—
Rectum	15	5	10	—	1	—	1	—	—	—	—	—
Prostate	13	11	11	—	—	3	—	—	1	—	—	—
Head and Face ...	5	6	11	—	—	—	—	—	1	—	—	—
Bladder	2	6	7	1	1	2	1	—	—	—	—	—
Bones	2	4	3	—	3	—	—	—	—	—	—	—
Abdomen	—	1	2	—	—	1	—	—	—	—	—	—
Colon	6	21	21	—	2	—	—	1	—	1	—	2
Peritoneum	—	2	—	—	1	—	—	—	—	—	—	—
Spleen	1	1	—	—	—	—	—	—	—	—	—	—
Legs and Feet ...	2	1	4	—	—	—	1	—	—	—	—	—
Hand and Arm ...	—	2	1	—	—	—	—	—	—	—	—	—
Penis	2	1	—	—	—	—	—	—	—	—	—	—
Testes	—	—	—	—	2	—	—	—	—	—	—	—
Chest	1	6	—	—	—	—	—	—	—	—	—	—
Heart	—	—	1	—	—	—	—	—	—	—	—	—
Kidneys	2	4	3	—	1	1	—	—	—	—	—	—
Glands	2	6	8	—	—	1	—	—	—	—	—	—
Brain	3	10	2	—	—	—	—	—	—	—	—	—
Spine	2	3	3	—	—	—	—	—	—	—	—	—
Unspecified	6	16	13	—	2	2	—	—	1	—	—	—
Total	277	285	296	40	37	52	10	14	13	8	2	6

Whilst the incidence of Malignant Disease shows a slight increase, it is still more than desirable that persons of 35 years or over should on the least suspicion seek skilled medical advice as consistently advocated by the National Cancer Association of South Africa.

MEASLES.

The death-rates per 1,000 were as follows:—

	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
Whites	0·06	0·009	0·05	0·02	0·003
Natives	0·03	0·03	0·02	0·03	0·05
Eurafrians	0·21	0·06	0·06	0·14	—
Asiatics	0·10	—	0·09	0·20	0·09

VENEREAL DISEASE.

195 White and 2,972 Coloured cases of Syphilis and other venereal diseases from Johannesburg were treated at Rietfontein Hospital during the year 1936-37.

STATISTICAL REPORT OF DIRECTOR FOR PERIOD 1st JULY, 1936 TO 30th JUNE, 1937.

Venereal Clinic (European).

1.—SUMMARY.

Out Patients		Specimens		Salvarsan	
No. of New Patients	Total Attendances	No. sent to Institute	No. Examined at Clinic	No. of Patients treated with 606 or Substitutes	No. of Doses Administered
1,459	14,322	764	571	1,485	6 282

2.—ATTENDANCES AND DISEASES.

Attendances of New Patients								Attendances of Old Patients							
Gonorrhœa		Syphilis		Soft Chancre		Not V.D.		Gonorrhœa		Syphilis		Soft Chancre		Not V.D.	
M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
820	153	323	161	2	—	—	—	3,913	1,171	4,960	2,808	11	—	—	—

3.—LABORATORY. NUMBER OF SPECIMENS EXAMINED AND RESULTS OF EXAMINATION.

Clinic						Institute										Total Number of Specimens Examined
Gonococci		Spirochaetes		Others		Gonococci		Spirochaetes		Wasserman Test						
+	-	+	-	+	-	+	-	+	-	+++	++	+	-	?		
261	238	—	—	20	29	52	64	—	—	295	23	8	343	—		
															1,335	

Venereal Clinic (Non-European: Females and Children Only).

1.—SUMMARY.

Out Patients		Specimens		Salvarsan	
No. of New Patients	Total Attendances	No. sent to Institute	No. Examined at Clinic	No. of Patients treated with 606 or Substitutes	No. of Doses Administered
181	1,576	88	—	317	1,063

2.—ATTENDANCES AND DISEASES.

Attendances of New Patients								Attendances of Old Patients							
Gonorrhœa		Syphilis		Soft Chancre		Not V.D.		Gonorrhœa		Syphilis		Soft Chancre		Not V.D.	
M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
—	5	—	150	—	—	—	—	—	73	—	1,348	—	—	—	—

3.—LABORATORY. NUMBER OF SPECIMENS EXAMINED AND RESULTS OF EXAMINATION.

Clinic.				Institute											Total Number of Specimens Examined.
Gonococci		Others		Gonococci		Spirochaetes		Wasserman Test					Others		
+	-	+	-	+	-	+	-	+++	++	+	-	?	+	-	
-	-	-	-	-	-	-	-	48	11	7	19	1	-	-	86

REMARKS.

1. ATTENDANCES OF PATIENTS.

European Centre.—As compared with the previous year there is a slight increase in the number of new patients who sought advice and treatment at this centre during the period under review.

The same applies to the total attendances, which show an increase of approximately 16 per cent.

2. GENERAL.

As in the past, courses of instruction have been given at your European Centre to the following groups:—

- (a) Fifth and Sixth year medical and dental students of the University of the Witwatersrand.
- (b) Members attending the Department of Public Health Course of the University.
- (c) The ladies who are taking the Health Visitors' and School Nurses' Course under the auspices of the Witwatersrand Technical College.

HENRY GLUCKMAN, M.R.C.S., L.R.C.P.,
Director, Johannesburg City Council's
“ Special Treatment Centres.”

OPHTHALMIA NEONATORUM AND GONORRHOEAL OPHTHALMIA.

CASES NOTIFIED.

	1934-35.	1935-36.	1936-37.
Ophthalmia Neonatorum—			
Whites	27	36	93
Natives	6	4	40
Eurafricans	2	1	10
Asiatics	2	6	2
	37	47	145
Gonorrhœal Ophthalmia—			
Whites	3	2	4
Natives	—	2	1
Eurafricans	—	3	1
Asiatics	—	—	—
	3	7	6
All Cases—			
Whites	30	38	97
Natives	6	6	41
Eurafricans	2	4	11
Asiatics	2	6	2
	40	54	151

The number of notifications of these diseases received is about treble the numbers notified in previous years. It is not however thought that there has been any material increase in the actual number of cases, because it was well known that in previous years notification of these diseases was notoriously incomplete, largely on account of the failure of midwives, especially uncertificated midwives, to notify cases of discharging eyes. Their previous neglect in this respect has been corrected largely through the supervision which is now exercised by the newly appointed Inspectress of Midwives and Nursing Homes.

NOTIFIABLE INFECTIOUS DISEASES.

During the year under notice, 2,118 cases were notified, viz., 1,173 amongst Whites, 854 amongst Natives, 63 amongst Eurafrians, and 28 amongst Asiatics. Of these cases 340 were imported (28 White, 310 Native, and 2 Eurafrian).

These occurrences are discussed elsewhere in this Report.

The procedure adopted in regard to notified infectious diseases, disinfection, etc., has been the same as recorded in previous years.

1,957 houses and 29,834 articles of clothing, bedding, etc., were disinfected.

SMALLPOX.

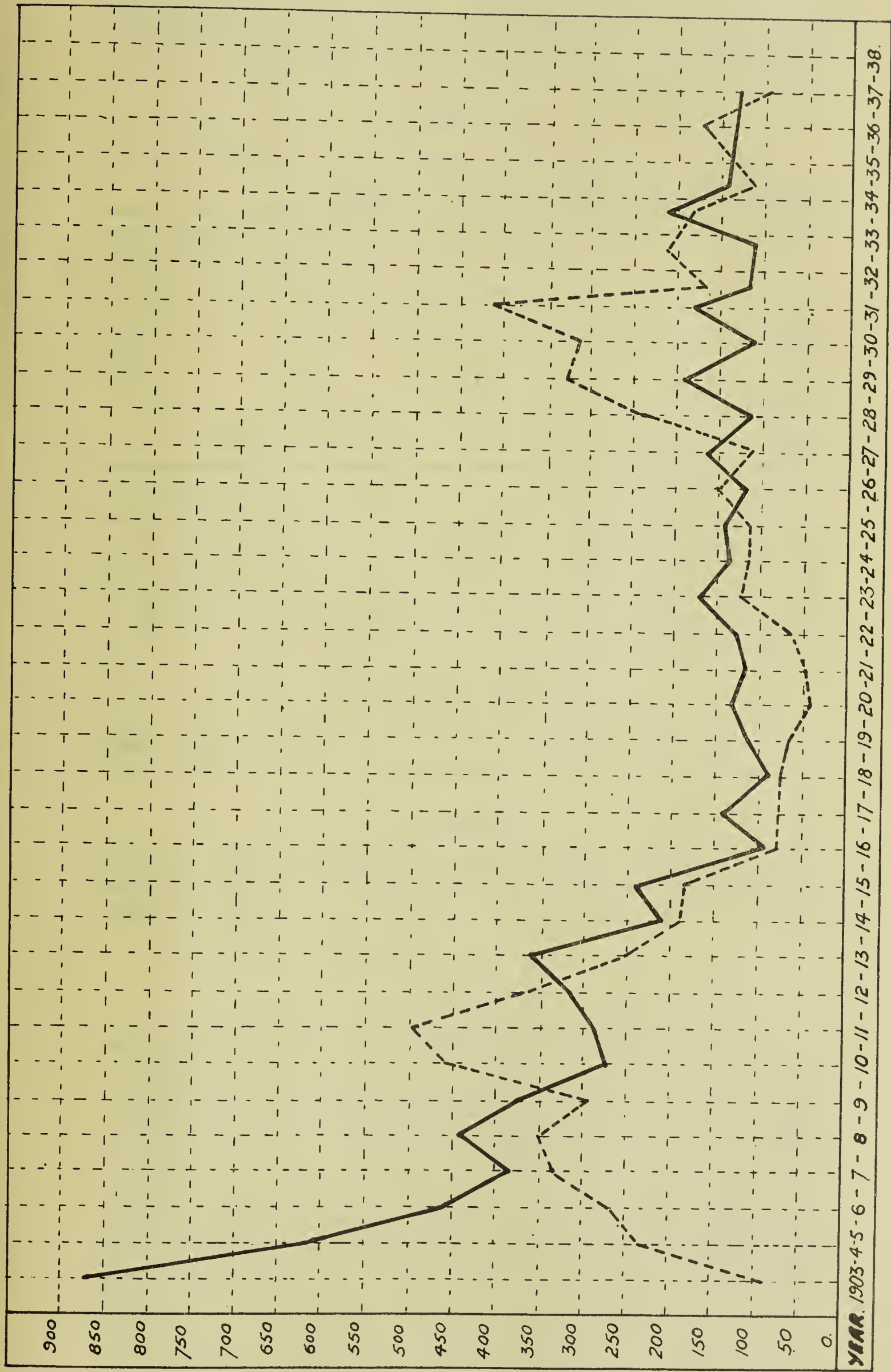
One Native case of Amaas was reported during the year.

ENTERICA.

In the following is set forth the number of cases, and deaths, together with the case-rate per cent. and the death-rate per 1,000, and the death-rate for England and Wales.

	1934-35				1935-36				1936-37			
	Cases	Deaths	Case-rate %	Death-rate	Cases	Deaths	Case-rate %	Death-rate	Cases	Deaths	Case-rate %	Death-rate
Whites	139	16	11·51	0·06	137	16	11·68	0·06	128	15	11·72	0·057
Natives	104	60	57·69	0·33	166	67	40·36	0·35	98	40	40·82	0·20
Eurafrians	11	3	27·27	0·20	11	2	18·18	0·09	13	4	30·77	0·22
Asiatics	6	1	16·66	0·09	7	1	14·28	0·10	13	3	23·07	0·29
England and Wales ...				0·004 (1934)				0·004 (1935)				0·006 (1936)

YEARLY INCIDENCE OF ENTERIC FEVER IN THE 34 YEARS, 1903-4 TO 1936-37.



WHITES - CONTINUOUS LINE. NATIVES - DOTTED LINE.
 There is nothing in this incidence to comment on except its continued lowness.

ERYSIPELAS.

94 White, 33 Native, 4 Eurafrian and 1 Asiatic cases of Erysipelas were notified in 1936-37, as compared with 74 White, 17 Native and 2 Asiatic in 1935-36 and 77 White, 12 Native and 2 Asiatic cases in 1934-35.

MENINGITIS.

The following table shows the registered number of deaths, with death-rates, from meningitis during the triennium 1934-37:—

			1934-35		1935-36		1936-37	
			Deaths	Death-rate	Deaths	Death-rate	Deaths	Death-rate
Whites	...	...	40	0.16	19	0.07	23	0.08
Natives	...	...	122	0.66	31	0.16	32	0.16
Eurafrians	...	...	3	0.20	2	0.09	3	0.13
Asiatics	...	...	3	0.28	3	0.30	1	—

The failure of Medical Practitioners to notify cases of this disease was severely commented on in a previous report, when 168 deaths occurred and only 145 cases were notified. It is gratifying to note that the warning has had a salutary effect, since in the year under review the number of deaths was but 58 and the number of cases notified amounted to 115. These figures also indicate that the incidence has decreased considerably and that the death rate is markedly lower.

INFANTILE PARALYSIS.

(Acute Poliomyelitis.)

Fourteen cases (12 White, 1 Native and 1 Asiatic) were reported in 1936-37 as compared with nil in 1935-36. Infectivity from case to case was not apparent.

LEPROSY.

53 Native and 1 European cases were notified in 1936-37. With the exception of 1 Native all cases were infected before arrival in the Municipal Area, and all were transferred to the Government Leper Institute in Pretoria.

PLAGUE PREVENTION AND ANTI-RODENT ACTIVITIES.

No cases of plague occurred during the period under review.

A safety zone continues to be maintained at an approximate radius of three miles beyond the Municipal boundaries. This has necessitated the carrying out of field rodent destruction in 36 distinct areas, totalling many thousand acres. 706 lbs. Cyanogas, 62 lbs. wheat, 10 lbs. sugar, and 10 ozs. strychnine have been used in this work. In addition, other large areas have been surveyed. 2,702 Veld rodents were found dead.

Owing to rodent infestation of the Council's Native Townships of Orlando and Pimville, one rat-catcher and two rat-catching youths are employed to deal with the former and one rat-catcher and two youths with the latter. In Orlando Township 9,552 visits to houses were made, 3,509 houses treated, 11 $\frac{3}{4}$ lbs. wheat, 261 lbs. Cyanogas used, and 6,181 rats caught. In Pimville, 9,533 visits to houses were made, 3,232 houses treated, 220 lbs. cyanogas, 34 lbs. wheat used and 5,087 rats caught. In addition anti-rodent measures have been carried out in the surrounding areas, including Kliptown and Nancefield.

Subsequent to discussion with the Union Health Department the anti-rodent staff was augmented and re-organised towards the end of the year under review. The staff was increased by two Inspectors, five Ratecatchers and five Ratecatching

youths, and as the result of reorganisation two Inspectors, who are suitably qualified for the work, are employed—mainly in the commercial and industrial areas of the city—in enforcing the provisions of the Government Rodent-proofing Regulations; five ratcatchers have been placed under the supervision of the five Divisional Inspectors working in the residential suburbs; two anti-rodent gangs have been stationed in the Eastern and Western Native Townships respectively; and a mobile anti-rodent gang has been established for general duty throughout the city.

During the two months the “anti-rodent measures” inspectors were employed they made 389 visits and served 45 notices. The premises visited included bioscopes, theatres, grain stores, furniture stores, cafés, restaurants, hotels, general dealers, etc., and numerous interviews with owners, architects and builders took place.

Stocks in grain stores and the Municipal Market have been frequently “turned over” and numbers of rats have been destroyed by trained municipal dogs.

During the period 8th May, 1937, to 30th June, 1937, 1,288 houses were inspected, 674 houses were treated, 56 lbs. of cyanogas were used and 998 rats caught in Eastern Native Township; 1,196 houses were inspected, 890 houses were treated, 95 lbs. of cyanogas were used and 1,087 rats caught in Western Native Township.

All hares coming into the Municipal area have been seized and destroyed.

4,402 trucks conveying produce have been examined at the Kazerne and Newtown Railway Siding. Municipal dogs are employed in this work.

All rodents found dead, all rodents obtained from railway trucks and a proportion of trapped rats are sent to the South African Institute for Medical Research for bacterial examination. During the year 1936-37, of the 27,611 rats and 2,135 mice caught, 3,254 or 10.94 per cent. were so examined; none were plague infected. 350 rats were supplied to the Witwatersrand University for experimental purposes.

SCARLET FEVER.

In 1936-37 there were 512 White, 2 Native and 1 Eurafrican cases of this disease. There were 2 deaths among the White population, the death-rate being 0.007. In the two previous years the cases notified were 854 White, 3 Natives and 1 Eurafrican in 1934-35 and 683 White, 3 Natives, 3 Eurafrican and 1 Asiatic in 1935-36, the mortality rate being 0.02 and 0.027 per 1,000 respectively. The rate per 1,000 in England and Wales for 1936 was 0.012.

TYPHUS.

One Native case was reported in 1936-37, as against 2 imported Native cases in 1935-36 and 4 White, 2 Native and 3 Asiatic cases in 1934-35.

DIPHTHERITIC DISEASE, INCLUDING MEMBRANOUS CROUP.

The occurrence of diphtheritic disease in 1936-37 numbered 221 (207 Whites, 6 Natives, 6 Eurafricans and 2 Asiatics), in 1934-35 148 (132 Whites, 12 Natives and 4 Eurafricans), and in 1935-36 170 (157 Whites, 6 Natives, 5 Eurafricans and 2 Asiatics). The case mortality for Whites being 6.28, 7.40 and 8.91 per cent. for the respective years in order mentioned above, and the death-rate per 1,000 was 0.09 in 1934-35, 0.05 in 1935-36, and 0.049 in 1936-37, as compared with 0.075 for England and Wales in 1936. This death-rate for 1936-37 is unusually low.

PUERPERAL SEPTICÆMIA, ETC.

In 1936-37 103 local cases (52 White, 41 Natives, 9 Eurafricans and 1 Asiatic) were reported, as compared with 56 (30 White, 17 Natives, 6 Eurafricans and 3 Asiatics) in 1935-36 and 60 cases (39 White, 16 Natives and 6 Eurafricans) in 1934-35. The death-rate for 1936-37 was 1.05 per 1,000 births for Whites, as against 1.34 in England and Wales in 1936.

ANTHRAX.

One Native case of this disease was notified in 1936-37 (patient died).

INFLUENZA.

The number of registered deaths from influenza during the year was 46 Whites, 36 Natives, 5 Eurafricans and 1 Asiatic.

ENCEPHALITIS LETHARGICA.

Two White and 2 Native cases were notified in 1935-36 as against 1 Native case in 1935-36 and nil in 1934-35. 1 White and 2 Native deaths were registered, all being imported.

TUBERCULOSIS.

Appended is a statistical summary of the mortality from tuberculosis in Johannesburg for the years 1934-35, 1935-36, and 1936-37:—

DEATH-RATE PER 1,000.

	Pulmonary Phthisis			Other Forms of Tuberculosis		
	1934-35	1935-36	1936-37	1934-35	1935-36	1936-37
Johannesburg—						
Whites	0.25	0.23	0.164	0.02	0.027	0.053
Natives	1.17	1.15	1.05	0.19	0.23	0.21
Eurafricans	2.14	2.04	2.40	0.17	0.23	0.36
Asiatics	0.86	1.02	1.26	0.18	0.20	0.19
England and Wales ...	1934 0.635	1935 0.605	1936 0.583	1934 0.128	1935 0.113	1936 0.109

Notification of Tuberculosis.—535 notifications were received during 1936-37, namely, in regard to 32 Whites, 483 Natives, 15 Eurafricans, and 5 Asiatics. Of these cases 4 Whites and 208 Natives were imported.

The incidence in Natives is practically confined to Natives employed on the Mines.

ISOLATION HOSPITALS.

Fever Hospital.—The number of White cases treated at the Fever Hospital in Johannesburg was 697 as compared with 665 in 1935-36, as follows: Scarlet fever 271, diphtheria 241, erysipelas 72, measles 33, meningitis 17, chicken-pox 6, whooping-cough 5, mumps 19, German measles 17, other cases 16. The total number of patient days was 17,780.

The cost of the upkeep of the Fever Hospital for 1936-37 was £13,578 14s. 11d.

Springkell Sanatorium.—31 non-miners suffering from tuberculosis were being treated at Springkell Sanatorium on 1st July, 1935, and 49 fresh cases were sent there during 1936-37. 12 Patients died and 34 left. The cost of treatment of these cases was £4,856 16s.

Rietfontein Hospital.—The following non-European cases of infectious diseases were removed for treatment to Rietfontein Hospital, viz.:—

Ninety-three cases of chicken-pox, 22 cases of measles, 44 cases of diphtheria, 14 cases of mumps, 28 cases of whooping-cough, 7 cases of scarlet fever, 6 cases of meningitis, 7 cases of erysipelas, 1 case of typhoid, 1 case of amaa, and 1 plague contact. The cost of these services was £486 9s.

AMBULANCE REMOVALS.

During the period under review, 27 White cases and 217 Coloured were removed to Rietfontein Hospital, 550 White cases to the Fever Hospital, and 82 White cases to the General Hospital. In addition, 24 White patients were removed to the Children's Hospital, 66 patients to the Non-European Hospital, 29 Whites to Springkell Sanatorium, 50 Whites to Private Hospitals, 2 to Municipal Compound Hospital, and 12 cases were transferred to private dwellings. Six cases were also removed from outside districts at the request of, and on payment by, the local authorities concerned.

LIVE STOCK MARKET AND PUBLIC ABATTOIR.

The following figures have been kindly supplied by the Director, Abattoir and Live Stock Market:—

During 1936-37 1,364,820 animals passed through the Live Stock and Quarantine Yards, and 141,244 cattle, 514,489 sheep, etc., 18,610 calves and 128,121 pigs, or a total of 802,464 animals, were slaughtered at the Abattoir; 2,039,666 lbs. imported meat was inspected, and 1,696,237 lbs. meat was condemned.

FOOD AND DRUG INSPECTORS' REPORT.

ANALYSIS OF FOODS, ETC.

Milk.

Appended is tabulated summary of milk samples taken from local milkshops, depots and delivery vehicles, and on behalf of the Union Government, on railway stations within the Municipal Area:—

		1934-35	1935-36	1936-37
Number of samples taken	...	645	686	892
Number deficient in solids-not-fat : 8% to 8.4%		—	73 = 11.3%	281 = 31.5%
Number of Prosecutions	...	32	45	
Added water		—	—	92)
Deficient in milk-fat		—	—	24) 116
Amount of Fines		£64 0 0	£111 15 0	£661 12 6

Food and Drugs.

The following is a summary of samples of foodstuffs taken by the Local Authority and on behalf of the Union Department of Public Health:—

Article.	Number of Samples.		Below Standard or Adulterated.		Fines.
Minced Meat	...	135	...	50	£232
Ice Cream	...	27	...	9	£41
Honey	...	5	...	—	—
Powdered Milk	...	1*	...	—	—
Acidophilus Milk	...	2	...	—	—
Kaffir Corn Meal	...	1	...	—	—
Canadian Jonathan Apples	...	1	...	—	—
Kaffir Polony	...	5	...	—	—
Boer Wors	...	4	...	3	£13
Beef and Pork Sausage	...	1	...	1	£5
Unsifted Boer Meal	...	1	...	—	—
Bran	...	1	...	—	—
Aerated Waters	...	9	...	—	—
Lemon Squash	...	1	...	—	—
Orange Squash	...	1	...	—	—
Soap	...	6	...	1	Not Guilty
Total	...	201	...	64	£291

* Sample taken to justify seizure and destruction of 40 cases weighing 5,620 lbs.

There were two prosecutions for contravening Section 32 (1) (b) of Act 13 of 1929:—

- (a) Refusal to sell a sample of milk—guilty and cautioned.
- (b) Refusal to sell a sample of minced meat—guilty; fined £5.

MILK SAMPLES—SOLIDS-NOT-FAT BELOW 8·5 PER CENT.

The standard of milk solids-not-fat is rapidly falling and, as will be seen in the summary, 31·5 per cent. of the total milk samples taken were below the standard of 8·5 per cent. No prosecutions were instituted in these 281 cases, but a serious state of affairs has arisen, and I would respectfully suggest that this be brought to the notice of the Union Agricultural Department and the Union Public Health Department.

Of these 281 samples which contained less than 8·5 per cent. solids-not-fat

23 contained 8·0 per cent.	95 contained 8·3 per cent.
27 contained 8·1 per cent.	86 contained 8·4 per cent.
50 contained 8·2 per cent.	

The number of samples taken under the Food, Drugs and Disinfectants Act is equal to 4·55 per 1,000 of the European population, i.e.

on behalf of the City Council ...	...	3·27 per 1,000
on behalf of the Government ...	...	1·28 per 1,000

As from the 26th May, 1937, the number of free samples permitted by the Government has been increased from 720 to 1,011 per annum. This does not include samples taken on behalf of the Government by this Department.

Milk Adulterations.

1936-37 ...	13 per cent.	1935-36 ...	6·56 per cent.
-------------	--------------	-------------	----------------

The increase in the percentage of milk adulterations was probably due to the shortage of milk experienced during the early months of 1937, the irregular hours and days on which milk samples were obtained, i.e. early mornings, 3 a.m., nights, Saturdays and Sundays, and also the large number of adulterated milk samples obtained from tearooms and general dealers' premises, which equals 5·67 per cent.

In the case of milk samples taken on behalf of this Department, 141 warning letters were sent to dairymen, where the milk was found to be deficient in milk-solids-not-fat, i.e. between 8 per cent. and 8·5 per cent.

Minced Meat.

On investigation it was found that a large number of butchers were in the habit of adulterating minced meat by adding sodium sulphite crystals. This preservative retards decomposition and masks putrefaction, and has a tendency to give stale meat a fresh reddish appearance.

As this was a contravention of Regulation 14 (4) of the Food, Drugs and Disinfectants Act, No. 13 of 1929, which prohibits the addition of any preservative to minced meat, a circular was posted in January, 1937, to all licensed butchers within the Municipal Area, warning them with regard to the requirements of the Act. Subsequently samples of minced meat were taken from butchers, and during the first few weeks approximately 60 per cent. of the samples contained preservative. During the month of June, 1937, after extensive sampling these figures had been reduced to approximately 13 per cent. It is expected that during the coming year the use of preservatives will be reduced to a minimum.

Water Supply.

Three new borehole water supplies for use in blocks of rooms and at a dairy in New Clare were condemned as being unfit for human consumption or for use in the preparation of foodstuffs, on account of pollution indicated on analysis.

Foods Condemned.

The following foods were condemned by the Food and Drugs Inspectors:—

Fish: 34,383 lbs.

Powdered Milk: 42 cases weighing 5,620 lbs.

Shelled Walnuts: 36 cases and 2 bags weighing 2,470 lbs.

Smoked Snoek: $9\frac{1}{2}$ cases.

Dried Apricots: 10 bags.

Dried Plums: 1 bag.

Dried Fruit: 3 cases:

Dried Beans: 2 bags.

Smoked Fish: 67 cases.

Bananas: 120 crates weighing 28,460 lbs.

Dressed Poultry: 436 and 6 cases.

Oatmeal: 1 bag.

Mealie Meal: 1,850 lbs.

Cheese: 1,720 lbs.

Medicated Confectionery: 2 cases.

Prawns: 35 lbs.

Meat and Colonies: 270 lbs. and 5 pigs' heads.

Bread: 160 loaves.

Lime Juice Cordial: 133 bottles.

Lemon Squash: 19 bottles.

Oats: 60 lbs.

Foodstuffs Contained in Hermetically Sealed Tins and Jars.

Tinned Meat: 92 tins and 4 cases.

Tinned Fish: 330 tins, 9 cases and 9 jars.

Assorted Tins: 92 cases and 394 tins.

Tinned Ham: 18 cases and 15 tins weighing 1,570 lbs.

Morning Market.

Inspection of incoming foodstuffs exposed for sale by auction:—

26,268 dressed poultry.

3,970 lbs. of fish-in-ice.

2,751 buck.

675 guinea fowl.

Condemned.

3,114 dressed poultry.

3 buck.

19 bags of artichokes.

1,290 lbs. of fish-in-ice.

Early morning inspections have been made throughout all sections, and quantities of vegetables, fruit, hams, bacon, etc., have been examined, and all unsound foodstuffs have been dealt with accordingly.

Four Market Agents were prosecuted for exposing for sale fruit and dressed poultry which were unfit for human consumption, and were fined £24 in all.

A stallholder in the Market Buildings was prosecuted for having in his possession for the purpose of sale 1,610 lbs. of unsound cheese, and was fined £10. The cheese was seized and destroyed.

During the period under review the following foodstuffs were passed at the Kazerne:—

Crayfish: 5,615 lbs.

Fish: 11,384,812 lbs.

Smoked Fish, etc.: 1,131,525 lbs.

Meat: 70,449 lbs.

Biltong: 12,734 lbs.

Dressed Poultry: 37,909 lbs.

Buck: 7,872 lbs.

Hams and Bacon: 379,402 lbs.

Investigations were made into four cases of suspected food poisoning. Samples of mealie meal, cake, apples, and a mixture of boer meal, bran and flour, were submitted to the Government Analyst for the purpose of analysis. The mealie meal, cake and apples were found to be satisfactory, but arsenic was detected in the case of the mixture of boer meal, bran and flour.

Blown Tinned or Hermetically Sealed Foodstuffs.

Inspections were carried out at all wholesale and retail grocers and bazaars. All foodstuffs were carefully examined, and where blown tins were exposed for sale, action was taken. Four general dealers were prosecuted for this offence, and were fined £18 in all.

Food Manufacturing Factories.

Regular inspections have been made at all factories where articles of food are manufactured. There are five large polony and sausage factories. Of these one has constructed a new factory and another is in the course of entire reconstruction. Complete bottle washing plants were installed in three vinegar factories, and one factory was reconstructed.

Indian Fruit Market, President Street West.

A number of fruiterers were in the habit of exposing bad and decayed fruit for sale. After warnings had been given, four fruiterers were prosecuted for exposing bad fruit for sale, and were fined £2 each. This has had a beneficial effect and bad fruit is now immediately destroyed.

General.

Two partners in a Ghee Manufacturing Co. were prosecuted for exposing Ghee to contamination, and sleeping in a room that communicated directly with a foodstore, and they were fined £13 in all.

Four butchers and two restaurant keepers were prosecuted for being in possession of unsound meat, and were fined £33.

For having 1,900 lbs. of foodstuffs that were unfit for human consumption on his premises, a general dealer was fined £10. The foodstuffs were seized and destroyed.

Hygienic Handling and Conveyance of Foodstuffs in the Streets.

Special attention has been paid to the conveyance of meat and bread. A butcher and four bakers were prosecuted for conveying uncovered meat and bread in the streets, and were fined £22 in all. A number of bakers have been warned with regard to the unsatisfactory handling of bread, and there appears to be a general improvement.

Foods and Drugs Act.

Observations and inspections have been maintained throughout the year in connection with the above Act.

Labelling of foodstuffs is now satisfactory, and where infringements were encountered, warning notices were served and followed up.

I. J. DISTILLER.

Senior Food and Drugs Inspector.

MILK SUPPLIES AND DAIRY INSPECTION.

(a) INSPECTION OF DAIRIES INSIDE THE MUNICIPAL AREA.

Local Milk Affairs.

The demand for milk to meet the requirements of the population of this City shows a daily increase of 5,101 gallons when compared with the corresponding period of last year. A carefully prepared census of milk supplies arriving from outside sources under the Council's control revealed that of the increased quantity of milk referred to, 3,405 gallons reaches the City by means of road transport and the remaining 1,879 gallons by rail. The production of milk at local dairies has decreased daily by approximately 183 gallons.

Sources of City Milk Supply as at June, 1937.

(a) Gallonage of milk arriving daily by road	...	...	13,305
(b) Gallonage of milk arriving daily by rail	...	...	13,129
(c) Gallonage of milk produced at local dairies	...	...	4,817
			31,251

Approximately one-fifth of the local milk supply is pasteurised or subjected to a form of heat treatment.

Local Producing Dairies.

The number of local producing dairies continues to diminish, and in this respect 19 such places have closed down during the past year; such conditions may be generally attributed to building activity in districts which were hitherto used by dairymen as grazing lands for their herds. The milk rounds attached to these dairies are mostly acquired by local producers owning premises suitably situated, hence the comparatively small reduction in the local daily milk output. It has been estimated that there are 2,220 cows kept at producing dairies situated within the Council's area.

Producing Dairies situated in Residential Areas.

Representations have been made to the Council that steps should be made for the removal of producing dairies from areas which, in recent date, have become typically residential. The Council has no power under the Public Health Act to adopt this procedure, and the experience of this Department is that the relatively few remaining dairies so situated cannot continue indefinitely. Economic pressure, lack of grazing, and the by-laws dealing with the prohibition of cow kraals, and those of site requirements are factors which tend to eliminate dairies from areas where their presence is considered to be undesirable.

New Dairy By-laws.

A further delay in the promulgation of the new dairy by-laws was experienced, such being due to objections raised by the licensees of tea-rooms, restaurants, etc., to the acceptance of these in the form in which they had been compiled, in so far that the licensees of such places had been precluded from selling milk, except in the form of refreshment or in the preparation of tea, coffee, etc. Approximately 600 licensees of tea-rooms, etc., were thus affected, and as the keeping of milk for sale attracted customers to their premises, where a variety of goods were stocked, it could be understood why a united front was presented by them to retain the right to retail milk.

Early during 1937, His Honour the Administrator of the Transvaal Province decided to appoint a Commissioner to hear the case for the Council and that of the objecting parties. At the onset of the sitting the Commissioner visited a number of tea-rooms, restaurants, etc., and he satisfied himself that the conditions met with generally were not in the best interests of public health. At the termination of the hearing the Commissioner, in framing his report, submitted a recommendation that the Council should make provision in its Dairy By-laws under which milk could be sold off trading premises, other than licensed dairies and milkshops. The Commissioner's recommendation was accepted by the Council and the promulgations of the By-laws received early attention. Briefly, the Dairy By-laws permit, under licence, the sale of milk from tea-rooms, restaurants, and similar establishments under the following conditions:—

- (1) That all the milk or milk products supplied to the premises of such licensee, whether for consumption on the premises or for sale for consumption off the premises, be obtained only from a licensed dairy or milkshop, in bottles or other containers of a capacity not exceeding one quart each, that have been filled and properly sealed in such licensed dairy or milkshop.
- (2) That the seals of the bottles or containers shall have been impressed or inscribed at the licensed dairy or milkshop from which they are obtained, with the name and address of such dairy or milkshop.
- (3) That the milk or milk products be sold for consumption off such premises not otherwise than in properly sealed and unopened bottles or containers, in which the milk or milk products were obtained from the licensed dairy or milkshop.
- (4) That the milk or milk products be stored in a refrigerator or ice-box at a temperature below 50 degrees Fahrenheit.

(b) A licence granted under these by-laws shall not entitle the holder thereof to purvey any milk or milk products, except from fixed premises, and no licensee or other person shall purvey any milk or milk products otherwise than from fixed premises.

It will therefore be seen that the sale of "loose milk," except from a licensed dairy or milkshop, is now prohibited.

Yearly Competitions for Gold Medal and Certificate of Merit Awards.

These competitions are conducted in conjunction with the Council's system of score-card inspections of licensed dairies and milkshops, such inspections taking place during each quarter of the year. To be eligible to compete, each dairy firm must in its particular section have obtained an average score of

at least 90 per cent. during the year. In addition, competition marks are allotted for (a) bacterial purity of milk, (b) absence of visible dirt in milk, all samples of milk being obtained during the ordinary course of sale or distribution.

Gold medals are awarded in each section for: 1, Conduct of milk; 2, Bacterial milk purity.

Certificates of Merit are awarded to competitors who, in the competition, obtain not less than 80 per cent. of the marks available.

Awards: Producer Retailer Section (City).

2 Gold Medals. 12 Certificates of Merit. 17 Entries. 3 Competitors failed to gain awards.

Awards: Producer Retailer Section (Outside Areas).

2 Gold Medals. 20 Certificates of Merit. 25 Entries. 3 Competitors failed to gain awards.

Awards: Raw Milk Depot Section.

2 Gold Medals. 22 Certificates of Merit. 30 Entries. 6 Competitors failed to gain awards.

No Awards: Milk Pasteurising Depot Section.

The three firms eligible to compete in this section handle milk chiefly obtained from distant sources. The Railway Administration has not kept pace with other world centres in the provision of modern methods of refrigeration as affecting the transportation of milk by rail, consequently these firms are handicapped in so far as these competitions are concerned. Incidentally lack of suitable refrigeration facilities for milk transportation on the railway system has caused many farmers within a radius of 30 miles of the City to adopt motor transport for the purpose of bringing in their milk supplies to the local receiving depots or milkshops.

Bacterial standards of milk purity for which Gold Medals were awarded:—

Producer Retail Section—City: 8,750 micro-organisms per c.c.

Producer Retailer Section—Outside Area: 9,200 micro-organisms per c.c.

Raw Milk Depot Section—20,000 micro-organisms per c.c.

Note.—Certified milk is regarded as milk which does not contain in its raw state more than 30,000 micro-organisms per c.c.

Typhoid Carrier Tests.

367 Dairy employees were subjected to Widal or Complement Fixation blood tests, and of this number 36 were returned as “reactors” as the result of blood examinations conducted at the S.A. Institute for Medical Research. These employees, who were natives, were removed to the Municipal Native Hospital for medical observation.

Tests for the Presence of Visible Dirt in Milk.

1,214 Such tests were made of milk supplies during the course of sale or distribution, with the following classification:—

(a) Good—where no dirt was visible on the test wads	...	1,135
(b) Fair—where dirt was visible in minor degree	...	54
(c) Bad—where dirt was highly visible	...	25
		1,214

Under normal conditions the producers or handlers of milk described as “bad” would have been summoned to answer a charge in the Magistrate’s Courts, but as 22 of these tests were made during the period that the Dairy By-laws were *ultra vires*, the persons concerned could not be proceeded against. The remaining 3 producers or handlers were charged under the new Dairy By-laws, the aggregate fines imposed being £10 10s.

Milk Propaganda.

This matter continues to receive attention, and the generous assistance given to the Department by the daily Press in regard thereto is greatly appreciated. Articles on the importance of milk as a food are periodically inserted in local magazines, sports programmes and issues of interest to the younger generation. Students of public health and other classes, together with visitors from other centres, are frequently conducted over dairies in and adjacent to the City.

Departmental Plans of Dairy Buildings.

Copies of the above-mentioned plans were supplied on request to the Grootfontein Agricultural College, School of Agriculture, Potchefstroom, Department of Agriculture and Forestry, Divisional Council of Port Elizabeth, Farmers’ Weekly, and to farmers situated as widely apart as the Cape Province and Rhodesia.

Inspections, Special Reports, etc.

Number of inspections	3,748
Special reports furnished to M.O.H. or A.M.O.H. ...	98
Plans examined for new premises	38
Attendances at Public Health Committee Courts ...	74
Prosecutions instituted	7
Fines paid: £21 10s.	

City Producing Dairies.

Number of applications received or inspected for licensees:—

(a) Larger producing dairies existing as at 30th June, 1937 ...	72
(b) Producing dairies where less than 5 cows are kept as at 30th June, 1937	3
(c) Licensed dairies where no cows are kept as at 30th June, 1937	2
(d) Licenses abandoned or refused	19
(e) Licensees granted for premises in course of erection ...	4
	100
Auctioneers' stock yards where cows are kept for sale ...	5

Milkshops.

Number of applications received or inspected for licensees:—

(a) Licensed milkshops (raw milk)	96
(b) Licensed milkshops (pasteurised milk)	7
(c) Licensee applications refused	21
	124

In conclusion, I have to point out that the work of dairy inspection and milk control has been rendered extremely difficult during the greater part of the year owing to the absence of Dairy By-laws. Credit is due to the dairy firms, whose position on the Council's Score Card is generally high, for the maintenance of their good standards during this period.

The co-operation extended to the Department by the Transvaal Milk Union and the Witwatersrand Dairymen's Association is acknowledged.

W. C. WATSON,
Senior Dairy Inspector.

*(b) INSPECTION OF DAIRIES OUTSIDE THE MUNICIPAL AREA.**Number and Situation of Dairy Farms.*

The total number of dairy farms from which milk was supplied during the year under review is 402. These farms are situated in the districts of Standerton, Ermelo, Bethal, Heidelberg, Pretoria, Witbank, Witwatersrand, Vereeniging, Krugersdorp, Rustenburg, Ventersdorp, Lichtenburg, Potchefstroom, and Klerksdorp in the Transvaal, and Heilbron, Wolvehoek, Greenlands, Kopjes, Rooival and Harrismith districts in the Orange Free State.

Milk Introduced into Johannesburg.

The quantity of milk introduced daily into Johannesburg from dairy farms, outside the Municipal Area was approximately 26,434 gallons. Of this supply, some 13,129 gallons were consigned by rail to stations within the City, whilst about 13,305 gallons were delivered by road transport.

Approximately 22,305 gallons of milk were supplied daily to owners of milk depots and milkshops, while about 4,129 gallons were delivered direct to the consumer by dairy farmers, licensed to retail milk in Johannesburg.

The approximate amount of milk used daily in Johannesburg was 31,250 gallons, of which 83 per cent. was supplied from sources outside the City. These figures show an increase of 5,000 gallons per day over the corresponding period of last year.

Farmer-owned Milk Distributing Depots.

Seventeen dairy farmers have established their own milk distributing depots within the City, through which 4,500 gallons of milk were retailed daily to the public.

Applications by Dairy Farmers for Permits to Introduce Milk into Johannesburg.

Applications received	...	...	...	...	416
Applications granted	...	...	...	...	292
Refused, withdrawn and held over	...	...	...	...	124

A permit to introduce, within the Municipality, milk or fresh cream produced on any premises outside the Municipality may be granted for any period not exceeding one year, and all permits expire on the 31st of December of the year for which they are granted. No permit is issued unless all the requirements of the Council's by-laws are complied with.

Applications by Dairy Farmers for Licences to Retail Milk in Johannesburg.

Applications received	...	...	...	...	54
Applications granted	...	...	...	...	47
Applications held over	...	...	...	...	7

Licences to retail milk direct to the consumer within the City are taken out by dairy farmers in addition to a permit. These licensed premises are situated at a favourable distance from the City.

Inspection of Farm Dairies.

Regular and systematic inspections were carried out at all dairies in which milk is produced and supplied to Johannesburg.

The results of these inspections were carefully recorded and any infringement of the Dairy By-laws dealt with immediately.

The number of inspections made was 1,702.

Plans drawn in accordance with the requirements of the Council's Dairy By-laws were supplied gratuitously to dairy farms contemplating the construction of buildings for dairying purposes.

Score-card Inspections.

Under this system 40 farm dairies, licensed to retail milk in Johannesburg, were scored quarterly. The scores ranged from 74 to 94 per cent.

Control of Milk Supplies.

Periodical inspections were made at railway stations inside Johannesburg and on the main roads leading to the City, of all supplies of milk consigned to Johannesburg. Seven supplies of unpermitted sources were discovered; further supplies from these sources were immediately prohibited.

Tests for Visible Dirt in Milk.

This test, which is applied by passing a pint of milk through a cotton wool pad of small area, thereby arresting and rendering visible all solid impurities, was applied to 544 consignments of milk arriving at railway stations or at the source of production.

The results were:—

Clean	...	438	Fair	...	93	Dirty	...	13
-------	-----	-----	------	-----	----	-------	-----	----

Thirteen farmers were warned by letter that proceedings for cancellation of their permit would be instituted without further notice should they in future introduce into Johannesburg milk containing visible dirt.

Typhoid Carrier Tests.

One hundred and four persons engaged in the production or handling of milk submitted themselves to the Widal test. Three Natives were found to be positive carriers of typhoid; nine were found to be doubtful.

All positive and doubtful cases were removed from the dairy premises on which they were employed to the Municipal Native Hospital for treatment.

We wish to express our appreciation of the willing co-operation of the great majority of dairy farmers in the production of clean, pure, wholesome milk of good quality for the Johannesburg market.

We also desire to thank the railway officials at the different railway stations for their assistance in connection with the testing and inspection of milk on railway property.

JAS. W. FORRETT,
D. SMITH,
Farm Dairy Inspectors.

WATER SUPPLY.

Water is supplied in bulk by the Rand Water Board to the City Council. The Council controls the distribution of water throughout the city and owns the reticulation. The following table shows the quantity and percentage of water pumped from various sources by the Rand Water Board and is taken from the Thirty-second Annual Report of the Chief Engineer, Rand Water Board:—

Source				Total Quantity Pumped during Year ending 31st March, 1937	Percentages
				Gallons	
From Zwartkopjes	...	...	..	215,352,000	1·75
From Zuurbekom	...	...	...	1,918,179,000	15·54
From Vaal River	...	...	...	10,208,951,000	82·71
Grand Total	...	...	...	12,342,482,000	100·00

The length of the mains within the Municipal Area is now 666·24 miles; 57·386 miles have been added during 1936-37, while during the same period 4,599,344,600, or 12,601,000 gallons of water per day, were supplied to consumers connected to same.

CHEMICAL AND BACTERIOLOGICAL EXAMINATIONS.

One hundred and seventy-seven chemical and 601 bacteriological samples of water were taken for examination during the year 1936-37, also 24 chemical and 23 bacteriological samples from private boreholes.

It is desired to acknowledge the obligation of the city to the officials of the Rand Water Board, who have at all times been assiduous in securing an adequate and pure supply of water to the city and in the area of their reticulation.

SEWERAGE.

The City Engineer has kindly supplied the following information:—

On 30th June, 1937, there were 482·95 miles of sewers and 74·06 miles of 4in. house connections completed.

On the same date 46,006 premises had been connected.

The Council's Sewerage System now includes outfalls to the Council's Sewage Farm at Klipspruit, and to the new Sewage Disposal Works at Antea (Langlaagte) for the Western Basin, Cydna (Melrose) for the North-eastern Basin, Bruma (South Kensington) for the Eastern Basin, and Delta for the North-western Basin.

REPORT OF BIO-CHEMIST.

SEWAGE DISPOSAL.

The total flow of sewage to the five sewage disposal works has increased by more than 25 per cent. for the year under review as compared with that of the preceding year. Thus the expansion of all the disposal works will have to be continued in one form or another.

The gas engine alternator sets at Bruma and Delta are proving satisfactory, and under the circumstances, economical. More than a million kilowatt hour units have been generated in the past 12 months, and as a national economy have saved more than 800 tons (short) of coal.

The following figures give details of the population and daily average flows to the different works.

Contributing population to the sewage disposal works (estimated):—

European	...	...	...	...	220,000
Non-European	...	...	...	...	95,000

Works.				Daily Average Flow.	
Klipspruit	...	...	...	...	6,128,633
Antea	...	...	...	...	195,208
Bruma	...	...	...	...	1,427,000
Cydna	...	...	...	...	777,485
Delta	...	...	...	...	800,000

Klipspruit Works.

Due to the increase of contributing population the flow to these works has increased by more than 20 per cent., and the irrigable lands are now being dosed to the maximum.

When the new works are put into operation, and a portion of the final effluent diverted to the proposed new power station for cooling water, the position will be somewhat improved.

The revenue produced from grazing was £8,553, and the total from all sources £9,268, showing a decrease of £773 compared with the preceding year. This decrease was caused by a falling off in revenue from grazing fees on account of a general plentiful supply of grazing due to a good grass growing season.

During the year 983 acres have been ploughed, disked, and harrowed by mechanical means, and 14,000 lbs. of Italian rye grass seed sown.

The work of lining earth effluent carriers with semi-circular concrete channels, each 3 feet long, was continued, 2,582 channels being laid, bringing the total length of concrete lined effluent carriers up to 27.4 miles.

Pilot Plant.

The experimental settlement tank, open percolating filter and "Pruss" enclosed filter were ready for operation in the middle of September, 1936.

The trials will be continued in order to provide data for the modernisation of the Klipspruit treatment plant.

KLIPSPRUIT PILOT PLANT.

DATA SHEET.

Settlement Tank.

Diameter, 20 feet 9 inches.

Total depth, 24 feet.

Depth of cylindrical top, 6 feet 6 inches.

Slope of conical sides, 60 degrees.

Capacity, approximately 26,400 gallons.

Open Percolating Filter.

Diameter, internal, 40 feet.

Height of walls (brickwork), 6 feet 1½ inches.

Floor sloped outward, 1:60.

Central chamber, 5 feet 6 inches diameter external, contains supporting column for distributor.

Aerating Floor, semi-cylindrical tiles 8 inches diameter, carried through walls.

Medium, bottom layer 12 inches of 3-inch to 6-inch mine stone. Upper layer 4 feet of 2½-inch mine stone. Cubic yards of medium (less tiles) 267.

Distributor, Simplex Patent Mercury Seal four-armed type.

Enclosed Pruss Filter.

Diameter, internal, 40 feet.

Height of walls (reinforced concrete), 20 feet.

Concrete roof sloped 1:4.

Floor sloped to centre 1:40.

Aerating floor, semi-cylindrical 8-inch tiles carried through walls.

Medium, bottom layer 1 foot 6 inches of 3-inch to 6-inch mine stone. Middle layer 12 feet of 2½-inch mine stone. Top layer 1 foot 6 inches of 2-inch to 3-inch mine stone. Cubic yards of medium (less tiles), 705.

Distributor, Simplex Patent Mercury Seal four-armed type.

ANTEA WORKS.

During the year a new 25 feet diameter hopper bottom humus tank, and an open earth-sided concrete slab-lined secondary digestion tank were put into operation, and construction of three small primary digestion tanks with floating steel gas collectors was commenced. The gas will be used in a gas-fired water heater, which will provide hot water for circulating in coils in these digestion tanks to raise the temperature of the digesting sludge.

Yeast Waste.

For a short time, pending completion of the special trades waste sewer pumping station and rising main, the discharge of over 10,000 gallons of yeast factory effluent was passed into the Antea main sewer.

The effect of this discharge on a works receiving only a little under 200,000 gallons of sewage per day was very severe, the percolating beds were unable to oxidise the yeast factory (molasses) waste, and the effluent quickly deteriorated.

On receipt of complaints of aerial nuisance a temporary vacuum tank service was arranged to carry the yeast waste to a point where it could be discharged into the Klipspruit sewer.

Within a few days of removal of the yeast waste the percolating beds gave the usual effluent.

BRUMA WORKS.

The increase of flow to these works is to be accounted for by the sewerage of new areas, and building activity in those existing. The performance of the plant has been good; more sedimentation tanks and primary digestion tanks, however, are to be provided, and the activated sludge plant extended in anticipation of further increase.

A low-level pumping station for delivering sewage from a low-level sewer, supernatant liquor from the secondary digestion tanks, and the drainage from the sludge drying beds, to a high-level sewer was completed.

This has improved the secondary effluent, as previously the supernatant liquor and drainage from the sludge drying beds was discharged into this effluent.

A small pumping station for returning humus and bacteria bed effluent to the activated sludge plant, and an additional pump electrically driven to deliver bacteria bed effluent on to land for irrigation purposes have been installed.

During the year the 105 kilowatt gas engine alternator set has produced 621,894 kilowatt hour units, and this supply has saved a considerable amount in the cost of electrical energy for the air compressing plant.

The total gas production for the year has been 43,350,000 cubic feet (at 5,400 feet above sea-level); 70 per cent. of this has been utilised by the gas engine alternator set and gas engine driven effluent pump. The remainder has been consumed by the gas-fired water heater for heating the digestion tanks, and some burnt to waste during peak gas production periods.

The plant has been operated in the manner reported on last year, some 650,000 gallons of settled sewage are given complete treatment in the main activated sludge plant, using 25 per cent. of the aeration capacity for sludge reconditioning. A completely stable and highly nitrified effluent has been produced.

The surplus sludge from this complete treatment plant with humus from the percolating beds is used to give partial treatment to some 200,000 gallons of settled sewage in the small overloading plant, the amount treated being varied according to the condition of the surplus sludge coming from the main plant, freedom from objectionable smell being the first consideration.

The effluents from the two activated sludge plants mix with the rest of the untreated settled sewage and the mixture gives no appreciable objectionable odour when distributed over the percolating filters.

The exhausted activated sludge and humus is passed to the screened sewage and causes no undue formation of scum in the primary settlement tanks.

CYDNA WORKS.

As the flow to these works is still increasing it has been found necessary to increase the sludge digestion tank capacity, because the Pruss digester now gives a capacity of a little less than 2 cubic feet per head of contributing population. Therefore, two secondary sludge digestion tanks are in the course of construction, and this will double the existing capacity.

These works, situated among good residential suburbs, have always functioned successfully, and never caused complaint.

The fish in the breeding ponds, which have a constant flow of effluent, have thrived.

DELTA WORKS.

The flow to these works averaged 800,000 gallons per day, and on occasions during the summer months was over 1,000,000 gallons per day.

The sedimentation tanks, which are designed to give an average upward velocity of 7 feet per hour capacity, have had no noticeable effect on the activated sludge portion of the treatment. Therefore, as the four existing sedimentation tanks are capable of handling a flow of 2,000,000 gallons per day, there is no need for these to be extended.

The activated sludge has at times settled but slowly in litre cylinders, yet has settled out quite well in the sludge separating tanks.

As the aeration and sludge separating tanks are working at almost full capacity, these units are now being increased by 50 per cent.

The sludge gas production has been such that the 156 B.H.P. gas engine alternator set has been run on an average for 16 hours per day, and on occasions for 24 hours per day.

This set has produced 390,270 kilowatt hour units during the year under review.

The activated sludge in the Delta plant, as also in the Bruma plant, has been in the state known as "bulked," with a density (total solids after one hour settlement) seldom above 0.5 per cent.

Only on a few occasions during the year has contamination of the primary effluent resulted from sludge failing to settle satisfactorily in the separating tanks.

RESEARCH ON SEWAGE PURIFICATION.

A model multiple activated sludge plant was constructed at Bruma Works to facilitate study of some of the difficulties and problems encountered in the activated sludge process.

Exact regulation of tiny flows of the order of a few hundred gallons per day has proved very difficult, and alterations to the feeding devices have been necessary.

This model plant has been moved to the Cydna Works, where it will be used to get advance information on partial treatment prior to percolating filters.

The treatment of yeast factory waste on small scale percolating filters, model activated sludge plant and model anaerobic digesters has been studied, but the results were not sufficiently encouraging to warrant large scale trials.

A study of the percolating bed has been commenced and will be pursued.

On 12th May a fire destroyed the roof on three sides of the Cydna Laboratory, and put a stop to all except essential routine work, which had to be carried on in the laboratories at Bruma and Delta Works.

Mr. J. A. McLachlan, whilst overseas on special study leave, presented a paper in July, 1936, to the Summer Conference at Exeter of the Institute of Sewage Purification, on "The Settlement and Rising of Activated Sludge."

SWIMMING BATHS.

Weekly visits by the bio-chemical staff were made to the ten public baths, when samples for bacteriological examination were taken. A new type of automatic doser for aluminium sulphate and for soda was installed and gave greater satisfaction than the old ones.

Copper sulphate was used several times to destroy growth of algae.

Tables of chemical analyses and bacteriological examinations made at the beginning and end of the season appear on pages 40 and 41.

WATER SUPPLY.

Algal Growth in Ycoville Reservoir.

The blue-green filamentous Alga *Phormidium* was present in the old open reservoir throughout the year and was held in check by almost continuous dosage with copper sulphate, at the rate of approximately 0.2 parts per million, with occasional increase up to 0.5 parts per million for about 24 hours, to kill off extra vigorous growth.

A green alga, a species of *Mougeotia*, was observed in May, 1937.

As previously reported, the unicellular form *cosmarium* was present in a thin film on the horizontal surfaces of the walls for the whole year.

SEWAGE DISPOSAL.

TABLE OF CHEMICAL ANALYSES FOR YEAR 1st JULY, 1936, TO 30th JUNE, 1937.

Average of Weekly Analyses: Parts per 100,000.

	Oxygen absorbed in 3 mins.	Chlorine in Chlorides.	Oxygen absorbed in 4 hrs.	Settlable Solids. (1 hour) Imhoff Cone.	Nitrous	Nitric	Ammon.	Albd.	Bio-Chemical Oxygen Demand 5 days test.	% Purification: Screened Sewage to Final Effluent	
										N.	N.
Antea Works:											
Screened Sewage	5.39	12.2	19.30	13.0	—	—	7.69	1.47	—	—	—
Tank Effluent	4.11	12.9	12.91	1.1	—	—	8.39	1.02	—	—	—
Primary Effluent	2.22	13.4	5.63	3.0 H.	0.18	1.19	3.24	0.63	—	—	—
Secondary Effluent	1.31	13.2	3.31	—	0.12	1.32	2.96	0.37	2.58	92.9	74.8
Bruma Works:											
Screened Sewage	3.50	16.5	10.69	14.7	—	—	6.65	1.35	—	—	—
Tank Effluent	2.68	16.0	7.69	2.2	—	—	6.40	0.83	—	—	—
Primary Influent	1.43	16.1	3.90	3.1	—	—	4.02	0.55	—	—	—
Primary Effluent	1.08	16.0	3.18	4.1 H.	0.17	2.83	0.90	0.48	—	—	—
Secondary Effluent	0.55	16.1	1.44	Trace	0.10	3.08	1.72*	0.21	1.74	86.5	84.4
Cydna Works:											
Screened Sewage	0.58	8.6	8.23	10.6	—	—	5.74	1.09	—	—	—
Tank Effluent	2.03	9.2	6.34	2.1	—	—	6.00	0.80	—	—	—
Primary Effluent	0.85	9.4	2.51	2.1	0.10	2.51	1.56	0.38	—	—	—
Secondary Effluent	0.30	9.3	0.88	—	Trace	2.21	1.26	0.19	0.75	89.3	82.6
Delta Works:											
Raw Sewage	3.22	10.9	9.17	14.0	—	—	6.18	1.31	—	—	—
Tank Nos. 1 and 2 Effluent	2.18	10.5	5.61	2.5	—	—	7.52	0.81	—	—	—
Tank Nos. 3 and 4 Effluent	2.24	10.3	5.48	7.5	—	—	7.30	0.89	—	—	—
Diffused Air Tank Nos. 1 and 2 Effluent	1.28	10.2	2.60	3.5	0.85	2.53	2.45	0.37	4.36	—	—
Diffused Air Tank Nos. 3 and 4 Effluent	1.07	10.2	2.41	2.2	0.57	0.99	4.09	0.38	4.83	—	—
Final Effluent	0.74	10.2	1.69	Trace	0.48	2.35	2.77	0.27	2.23	81.6	79.4
Klipspruit Farm:											
Screened Sewage	8.79	21.3	25.04	17.5	—	—	11.20	3.41	—	—	—
Primary Tank Effluent	6.87	20.3	18.01	11.2	—	—	10.76	2.12	—	—	—
Secondary Tank Effluent	6.66	20.7	16.61	4.1	—	—	10.72	1.65	—	—	—
Effluent to Homestead Farm	1.30	41.1	3.45	—	0.05	0.36	4.62	0.43	3.48	86.2	87.4
Effluent from Harrington's Spruit Filter	0.76	43.9	2.13	—	0.02	0.78	1.65	0.22	1.59	91.5	93.6

* Includes Supernatant Liquor.

H = Humus.

RESULTS OF THE CHEMICAL EXAMINATION OF SWIMMING BATH WATERS, SEASON 1936-1937.

RESULTS OF THE CHEMICAL EXAMINATION OF DRINKING WATER.																	Parts per 100,000.	
	Free Chlorine.	Total Chlorine.	pH.	Alkalinity.	Solids.			Total Hardness.	Oxygen Absorbed in 4 Hours.	Nitrous Nitrogen.	Nitric Nitrogen.	Ammoniacal Nitrogen.	Albuminoid Nitrogen.	B.O.D.	SO ₃ .	Al ₂ O ₃ + Fe ₂ O ₃ .	CaO.	MgO.
					Total Soluble.	Loss on Ignition.												
Zoo Lake:																		
September 1st	Trace	1.7	7.0	2.1	17.24	5.86	18.7	0.04	Nil	0.03	0.02	0.012	0.10	3.43	0.09	3.46	1.16	
October 15th	0.1	5.5	7.1	1.7	28.62	5.02	15.4	0.14	Nil	0.04	0.009	0.02	0.06	5.38	0.42	—	—	
December 3rd	0.1	7.8	7.2	1.2	27.05	6.9	12.4	0.10	Nil	0.12	Trace	0.021	—	4.61	0.44	—	—	
January 7th	0.1	8.0	7.0	0.84	31.01	10.8	12.5	0.11	Nil	0.12	0.021	0.025	0.09	10.03	—	—	—	
February 17th	0.2	10.8	6.9	1.04	32.74	9.78	14.5	0.11	Nil	0.144	0.013	0.026	0.15	4.12	0.26	—	—	
March 31st	0.3	12.0	7.6	1.3	39.14	11.66	16.0	0.08	Nil	0.023	0.01	0.018	0.07	5.2	0.21	8.99	0.64	
Ellis Park:																		
September 1st	Trace	1.7	7.1	1.6	17.59	4.49	14.6	0.04	Nil	0.03	0.02	0.013	0.08	3.48	0.34	2.19	0.74	
October 15th	0.1	3.5	7.2	1.5	25.05	3.87	13.8	0.17	Nil	0.01	0.03	0.021	0.09	6.31	1.78	—	—	
December 3rd	0.2	3.0	7.3	1.7	27.51	5.31	9.0	0.08	Nil	0.03	0.015	0.021	—	5.40	1.06	—	—	
January 7th	Trace	3.4	7.2	1.08	18.06	4.58	9.9	0.11	Nil	0.02	0.022	0.025	0.12	7.83	0.17	—	—	
February 17th	Nil	4.8	7.2	1.12	25.24	6.46	13.1	0.07	Trace	0.10	0.013	0.021	0.11	4.46	0.35	—	—	
March 31st	0.2	4.2	7.2	1.6	20.45	4.30	8.4	0.06	Nil	0.07	0.01	0.013	0.04	3.72	0.25	5.26	1.02	
Paterson Park:																		
September 1st	Nil	1.6	7.1	1.4	15.96	4.56	14.6	0.05	Nil	0.03	0.012	0.005	0.07	3.16	0.06	2.19	0.81	
October 15th	0.1	3.8	7.2	1.5	24.75	3.52	17.3	0.17	Nil	0.01	0.015	0.021	0.08	6.01	1.65	—	—	
December 3rd	Trace	3.6	7.2	1.4	20.65	4.02	8.0	0.06	Trace	0.05	0.011	0.021	—	4.95	0.18	—	—	
January 7th	0.4	4.8	6.8	0.56	20.09	3.64	9.3	0.11	Nil	0.04	0.022	0.028	Nil	5.91	0.14	—	—	
February 17th	0.1	4.4	7.0	0.88	22.88	7.55	11.4	0.11	Nil	0.072	0.015	0.028	0.07	5.30	0.23	—	—	
March 31st	Nil	4.6	7.2	1.4	22.42	4.83	7.65	0.05	Nil	0.07	0.013	0.016	0.05	5.24	0.30	4.98	0.59	
Pioneer Park:																		
September 1st	0.1	3.3	7.1	1.9	22.17	6.30	17.1	0.07	Nil	0.03	0.013	0.009	0.16	3.78	0.12	4.5	0.99	
October 15th	0.1	6.3	7.1	1.5	26.96	7.07	14.1	0.12	Nil	0.02	0.019	0.028	0.06	7.13	0.35	—	—	
December 3rd	Trace	8.8	7.2	1.3	35.71	6.87	11.6	0.06	Nil	0.02	0.018	0.024	—	7.42	0.11	—	—	
January 7th	0.2	11.2	6.8	0.56	39.28	13.59	14.3	0.11	Nil	0.11	0.044	0.024	0.04	6.73	0.25	—	—	
February 17th	0.1	9.6	7.0	0.76	32.30	7.41	16.8	0.10	Nil	0.12	0.008	0.020	0.07	5.62	0.10	—	—	
March 31st	Nil	11.6	6.9	1.2	39.54	9.00	14.2	0.08	Trace	0.20	0.11	0.012	0.09	7.16	0.28	8.93	0.76	
Milner Park:																		
September 1st	1.0	2.0	7.1	1.8	18.94	5.54	15.4	0.08	Nil	Trace	0.013	0.004	0.03	3.69	0.09	3.46	1.07	
October 15th	Nil	5.7	7.3	1.9	31.53	8.26	19.5	0.08	Nil	0.02	0.011	0.026	0.11	5.77	0.33	—	—	
December 3rd	0.1	6.4	7.3	2.0	30.89	6.44	12.2	0.12	Nil	0.06	0.015	0.023	—	4.87	0.12	—	—	
January 7th	0.3	10.4	7.1	1.16	42.04	12.38	16.7	0.11	Nil	0.04	0.026	0.029	0.08	7.67	0.63	—	—	
February 17th	0.1	11.0	6.8	1.08	40.99	11.92	19.5	0.14	Nil	0.08	0.016	0.031	0.16	7.35	0.22	—	—	
March 31st	Nil	10.2	6.9	1.3	39.39	10.06	15.6	0.06	Trace	0.10	0.014	0.018	0.05	8.08	0.37	8.79	1.37	

BACTERIOLOGICAL EXAMINATION OF SWIMMING BATH WATERS, YEAR 1936-1937.
AT BEGINNING AND END OF SEASON.

Bath.	Date Sampled.	Time Sampled.	Position Sampled.	Free Chlorine.	B. Coli at 37°C. present in 10 ccs.		Organisms per c.c. growing at 37°C.	Spreading Colonies.
					Acid. In 5 tubes.	Gas.		
Zoo Lake	... 1/9/36 31/3/37	11.45 a.m. 11.00 a.m.	Outlet Outlet	... trace 0.1	0/5 0/5	0/5 1/5	1 —	nil nil
Ellis Park	... 1/9/36 31/3/37	10.05 a.m. 9.15 a.m.	Outlet Outlet	... trace 0.2	0/5 0/5	0/5 0/5	8 8	nil nil
Paterson Park	... 31/8/36 31/3/37	3.15 p.m. 12.45 p.m.	Outlet Outlet	... nil nil	2/5 1/5	1/5 0/5	13 22	nil 3
Pioneer Park	... 1/9/36 31/3/37	11.15 a.m. 12 noon	Outlet Outlet	... 0.1 nil	0/5 0/5	0/5 0/5	9 40	nil nil
Milner Park	... 1/9/36 31/3/37	11.45 a.m. 11.55 a.m.	Outlet Outlet	... 1.0 nil	0/5 4/5	0/5 3/5	7 514	nil 3
Mayfair	... 1/9/36 31/3/37	10.40 a.m. 11.30 a.m.	Outlet Outlet	... trace nil	0/5 3/5	0/5 2/5	23 70	nil 18
Rhodes Park	... 1/9/36 31/3/37	12.10 p.m. 8.40 a.m.	Outlet Outlet	... 0.1 nil	0/5 2/5	0/5 2/5	2 607	nil nil
Yeoville	... 31/8/36 31/3/37	3.00 p.m. 12.20 p.m.	Outlet Outlet	... nil 0.1	0/5 1/5	0/5 1/5	2 5	nil nil
Turfontein	... 1/9/36 31/3/37	11.00 a.m. 11.30 a.m.	Outlet Outlet	... 0.1 nil	0/5 2/5	0/5 1/5	4 30	nil nil
Malvern	... 2/9/36 31/3/37	11.50 a.m. 9.00 a.m.	Outlet Outlet	... 0.1 nil	0/5 0/5	0/5 0/5	2 230	nil nil

MINES SANITATION.

The usual procedure has been carried out in regard to systematic inspections of the mining properties in the Johannesburg area.

This work has included inspections of Native compounds, hospitals and locations, married and single White quarters, contractors' compounds, brickfields, dairies and cowsheds, Native eating houses, stone crushing works, mine boarding houses, railway stations and quarters, pumping and power stations, disposal of refuse, the sanitary arrangements at the various works and the supervision of the daily cleaning up and scavenging at all places and premises on the surface.

All plans submitted in regard to new, or additions and alterations to existing housing accommodation, drainage or other sanitary requirements have been examined by the Medical Officer of Health and amended when necessary.

All cases of infectious disease among White, Native and Coloured persons have been visited, inquired into and reported on in the usual way.

SLUMS AND INSANITARY PROPERTIES.

1. SLUMS ACT.

At the commencement of the period under review the Department was dealing with 202 properties under the Slums Act, and during the year action was instituted in terms of the said Act in respect of 85 properties situated in the following townships: Vrededorp 22, Springfield 36, Bertrams 10, Lorentzville 9, Ferreiras 5, Johannesburg 1, Troyeville 1, North Doornfontein 1.

On the 30th June, 1937, the position with regard to the 287 properties concerned was as follows:—

- (a) Properties declared slums and such declaration rescinded after the premises had been demolished or reconstructed, 35. (Fordsburg 13, New Doornfontein 5, La Rochelle 3, West Turffontein 3, Kensington 2, North Doornfontein 2, Bertrams 1, Farm Doornfontein No. 24 1, City and Suburban 1, Regents Park 1, Jeppes 1, Booyens Reserve 1, Ophirton 1.)
- (b) Properties declared slums, further action to be taken to be decided, 55. (Springfield 36, Bertrams 10, Lorentzville 9.)
- (c) Properties declared slums, reconstruction or demolition in progress, or notices to be served under Section 5 (1) (a) and (b), 15. (Fordsburg 2, Farm Doornfontein No. 24 2, La Rochelle 2, New Doornfontein 1, Regents Park 1, Jeppes 1, Marshalls 1, Booyens Reserve 1, Ophirton 1, Judith Paarl 1, Ferreiras 1, North Doornfontein 1.)
- (d) Properties demolished or reconstructed as the result of undertakings given by owners, 15. (La Rochelle 5, Jeppes 3, West Turffontein 2, Fordsburg 1, City and Suburban 1, Paarlshoop 1, Kensington 1, Bellevue 1.)
- (e) Properties where work of demolition or reconstruction is in progress as the result of undertakings given by owners, 4. (La Rochelle 1, Jeppes 1, Klipriviersberg 1, Johannesburg 1.)
- (f) Number of properties in respect of which evidence has been heard by the Public Health Committee and its decision reserved, 89. (Vrededorp 87, North Doornfontein 1, Troyeville 1.)
- (g) Number of properties reported on in terms of Section 1 (2) of the Act in respect of which evidence has not yet been heard by the Public Health Committee, 4. (Ferreiras.)
- (h) Action withdrawn in respect of one property in Vrededorp; not used for human habitation.
- (i) Number of properties to be acquired by the Council by agreement or expropriation, 69. (Prospect.)

(Note.—The Council, at the same meeting (9th April, 1937) decided to acquire the remaining portion of Prospect Township.)

It will be seen from the foregoing that the number of properties being dealt with in terms of the Slums Act at the close of the year under review is 167.

On 30th April, 1937, the Slums (Amendment) Act, 1937 (No. 24 of 1937) was published in the "Government Gazette." This amending Act contains certain clauses which will remove difficulties experienced in administering the Act in the past.

2. CLOSING AND DEMOLITION ORDERS.

In addition to its activities under the Slums Act, the Department dealt with 109 insanitary properties in terms of Section 74 of the Local Government Ordinance, No. 11 of 1926. At the close of the year under review the position with regard to these properties was as follows:—

- (a) Closing Orders in operation, 62. (Bezuidenhout Valley 30, Doornfontein 6, Berea 5, New Doornfontein 4, Jeppes 4, Vrededorp 2, Lorentzville 2, Ferreiras 2, Booysens 1, Norwood 1, Johannesburg 1, Fordsburg 1, City and Suburban 1, Troyeville 1, North Doornfontein 1.) It is anticipated that it will be necessary to apply to the Court for Demolition Orders in respect of approximately 30 of these properties; the work of demolition and/or reconstruction is proceeding on the remainder.
- (b) Properties demolished before Closing Order obtained, 1. (Bezuidenhout Valley.)
- (c) Properties reconstructed before Closing Order obtained, 8. (Bezuidenhout Valley 4, City and Suburban 1, Farm Doornfontein No. 24 1, Lorentzville 1, Bertrams 1.)
- (d) Properties demolished after Closing Order obtained, 27. (Johannesburg 6, Jeppes 5, Doornfontein 4, Bezuidenhout Valley 4, Orchards 2, City and Suburban 2, La Rochelle 1, Norwood 1, Berea 1, Rosettenville 1.)
- (e) Properties reconstructed after Closing Order obtained, 11. (Norwood 2, Jeppe 2, Bezuidenhout Valley 2, New Doornfontein 1, Berea 1, Fordsburg 1, Ophirton 1, Bertrams 1.)

3. MINOR SLUMS.

In addition to action taken in terms of the Slums Act and Local Government Ordinance, No. 11 of 1926, the practice has been instituted—in the case of properties which may be termed “minor slums”—of notifying the owners that it is competent for the Council to deal with the said properties as slums and intimating the advisability of effecting the comparatively minor alterations and repairs required. Fifty properties were dealt with in this manner during the year under review, with fairly satisfactory results.

4. PROSPECT TOWNSHIP.

At its meeting held on 9th April, 1937, the Council decided to acquire, by agreement or expropriation, in terms of the Slums Act, the whole of Prospect Township, including the 69 properties which had been declared slums. This action of the Council will result in the removal of one of the worst insanitary areas within the municipal boundary; an area which, for many years, has been a considerable source of trouble to your Public Health Department, the police authorities and the employers of native labour—particularly the mines—in the neighbourhood.

HOUSING.

1. GENERAL.

(a) *Housing Survey.*

During the early part of 1937 a survey of the whole of the municipal area was made in order to assess the position with regard to the housing of the population.

In an effort to determine to what extent the Council should proceed in its activities towards re-housing and slum elimination, the insanitary properties were classified—with the possibility of action under the Slums Act in view—under three headings, viz.: (1) “major” slums being premises which would have to be completely demolished; (2) “major/minor” slums being premises which would require partial reconstruction and partial demolition; (3) “minor” slums being premises which would require reconstruction only (wholly or in part). The result of this classification is as follows:—

“Major” Slums	...	...	...	9,845
“Major/Minor” Slums	...	...	...	1,255
“Minor” Slums	...	...	...	2,921

Action under the Slums Act in respect of the aforementioned properties would necessitate the provision of housing for 7,136 European families, 7,070 native families, 2,847 Eurafrian families, and 899 Asiatic families. These figures indicate clearly the necessity of extending the housing policy of the Council, particulars of which follow.

(b) *Training of Housing Manageresses.*

During the latter part of the year under review the Public Health Committee has given consideration to the question of appointing an Octavia Hill trained Housing Manageress, and the Council has agreed to such an appointment being made. The Union Health Department has intimated that the Government is anxious to co-operate with the local authorities at Capetown and Johannesburg in providing facilities for the training of South African women in Housing Estate Management, and arrangements will be made for the training of two "pupil assistants" by the qualified Manageress to be appointed.

2. EUROPEAN HOUSING SCHEMES.

(a) *Jan Hofmeyr Township.*

The construction of Jan Hofmeyr Township—the Council's first sub-economic European housing scheme—was completed during the year and occupation was completed during February, 1937.

This model township comprises 194 houses (66 detached with two bedrooms, 102 detached with three bedrooms, and 26 semi-detached with two bedrooms) on sites approximately 75 feet by 50 feet. In addition to the bedrooms, each house contains a living room, kitchen (with ventilated food cupboard), bathroom and water closet, with a brick storage shed in the yard. The rentals are 10s. and 12s. 6d. per week for houses containing two bedrooms and three bedrooms respectively.

Gas is provided for cooking and heating at the special reduced rate of 3s. 4d. per thousand cubic feet, while electric current is provided at standard rates, i.e. 4d. per unit for each room for the first 6 units, and thereafter $\frac{1}{2}$ d. per unit.

The provision of a communal hall with clinic accommodation, and the layout of a recreation ground for this Township have been considered, and application has been made for the necessary sub-economic housing loan.

(b) *Future Schemes.*

Progress is being made in the establishment of sub-economic housing schemes similar to Jan Hofmeyr Township, at Bertrams and Glenesk, with the object of accommodating approximately 230 families. It is intended to erect a small number of "flats" or "maisonettes" in these two townships, and provision is also being made for the construction of a working girls' hostel in the Glenesk scheme.

The Bertrams site comprises an area which has been acquired by the Council in terms of the Slums Act, and it is anticipated that the tenders for the erection of the housing estate on this site will be considered by the Council early in the forthcoming year.

The application for a sub-economic housing loan for the Glenesk scheme has been approved and the working drawings are being prepared.

In May, 1937, the Council decided to purchase approximately 270 acres of land forming portion of the Klipriviersberg Estate Small Holdings, situated to the south-east of the city, with the object of establishing a sub-economic housing scheme of approximately 2,000 houses for Europeans.

3. NATIVE HOUSING.

The Council has under its control in its native locations 6,113 houses, and in its hostels for single native men and women has 6,766 beds for males and 130 beds for females.

During the year the fifth block at Wolhuter Native Men's Hostel was completed and occupied, and contracts were entered into for the erection of a further 3,000 houses at Orlando Township. These houses are being erected at the rate of 12 per day and are being used to accommodate the displaced natives at Prospect Township.

At the end of June, 1937, the Council housed approximately 60,000 natives in its various locations and hostels; in pursuing a policy of providing such extensive housing accommodation for natives, the City Council is showing itself to be most long-sighted in slum elimination in Johannesburg, as a very considerable proportion of the slums of the City exist primarily on account of native occupation in the poorer areas. It is also encouraging to note that natives and their families respond in a marked degree to the efforts made in

providing proper housing conditions in the Council's native townships, and particularly in the rapidly-growing Orlando Township, which is a model of its kind.

The Manager of the Council's Non-European Housing and Native Administration Department, in his last annual report states that "the resistance of the natives to the slum clearance process has almost disappeared. Four years ago not more than 12 per cent. of those evacuated from slum areas actually took up residence in locations and hostels. This figure is now over 90 per cent., and in the present abnormal conditions obtaining, the demand is so keen that all sorts of subterfuge is employed by natives from other areas to secure municipal accommodation."

4. COLOURED HOUSING.

During the year the Council decided to purchase approximately 200 acres of ground on the Farms Langlaagte and Middelfontein, immediately inside the western municipal boundary and adjoining the southern boundary of Western Native Township, for the purpose of establishing a housing scheme for Eurafricans, and the Administrator has approved of the application for the loan of £41,000 for this purpose. It is anticipated that, when completed, this scheme—to be called "Coronation Township"—will provide housing for approximately 600 families, and consideration is being given to the question of setting aside a portion of the estate to allow for the purchase of sites and the erection of houses by those members of the Eurafrican community who are in the position to do so.

5. ASIATIC HOUSING.

In addition to the activities detailed in the foregoing paragraphs the Council has now under consideration the provision of housing accommodation for Asiatics.

INSPECTION OF PLANS.

As predicted in last year's report, the work of inspection of plans increased considerably. No less than 11,522 plans were approved, as against 10,594 the previous year, and the estimated value of the work has increased accordingly. The figures for the year ending 30th June, 1937, are £11,420,353 as against £8,740,801 for 1936, an increase of £2,679,552.

All plans submitted to the Council through the City Engineer are passed on to your Medical Officer of Health for examination *re* all matters relating to drainage, lighting, ventilation, open space, licensing, etc. The provisions of the Factory Act, Native Labour Regulations (1911), Natives (Urban Areas) Act, Slums Act, Town Planning Ordinance, all receive necessary consideration before plans can be finally approved.

The majority of the drawings are returned for amendments and are, therefore, handled twice or three times.

As extensive slum clearance work is now proceeding under the Slums Act, the system is particularly valuable, especially in cases of partial demolition and rebuilding, as the closest co-operation exists between the officials concerned, enabling great improvements to be effected.

The co-ordination and organisation of work and the cordial relations existing between the City Engineer's staff, the Inspector of Factories, the Municipal Native Affairs Department, and the Plans Inspection staff is gratifying and is acknowledged.

Many architects and their assistants, builders, plumbers and owners avail themselves of the opportunities given to discuss improvements and amendments, and the qualified and valuable advice given is much appreciated.

The difficult problem of preventing some considerable amount of skilful circumvention of the By-laws has engaged the attention of your Medical Officer of Health and plans staff, and the measures to be adopted will, it is hoped, soon have a marked effect in planning of certain types of domestic buildings in specified areas.

In addition to the ground covered by the Special Inspectors, the District Inspectorate Staff have accomplished 216 inspections in connection with repairs to buildings, and 902 inspections in connection with unauthorised buildings.

ANNUAL RECORD OF DUTIES PERFORMED BY DISTRICT INSPECTORS ONLY.

From 1st July, 1936, to 30th June, 1937.

This page, indicating as it does the mass activities of the Inspectorate Staff of the Department, generally passed by—as being an incongruous mass of figures—by the public, the Press and those in authority. But in a way it is highly illuminating to those who wish to know the extent of the activities of the Staff of the Health Department of a large city. Including Licensing Inspections enumerated in the following table on “Licensed Places,” it means that the Inspectorate Staff of the Department made 173,235 visits to various premises in the course of the year. That figure substantiates a claim to meticulous and comprehensive inspection of premises by the Inspectorate Staff of the Department, and, it is thought, leaves little leaven to the bread of those who exclaim that they haven’t seen a Health Inspector or Sanitary Inspector for years.

INSPECTIONS.			
BUILDINGS—		INFECTIOUS DISEASES—	
Repairs to	216	Contacts	1,081
Unauthorised	902	Vaccination	—
CLOSETS AND URINALS—		LICENSED PREMISES—	
Inspected	19,695	Aerated Water and Ice Factories	105
Additional Provided	174	Asiatic Eating Houses ...	30
French Drains	339	Bakeries	1,079
Dwellings—Routine Visits ..	13,037	Hairdressers	813
Dwellings—Survey	68,864	Bioscopes	44
Factories	929	Boarding Houses	585
Business Buildings	920	Butcheries	3,191
Native Housing	1,288	Cowsheds	5
Interviews—Owners, Agents etc.	2,541	Dairies	6
Reports	1,667	Garages	434
NUISANCES—		General Dealers	10,285
Animals	237	Hawkers and Pedlars ...	794
Drainage	893	Hotel Dining Rooms	205
Fly	411	Ice Creameries	73
Manure	810	Kaffir Eating Houses ...	1,574
Mosquito	94	Laundries	360
Poultry	464	Lodging Houses	19
Rats	650	Milk Shops	32
Refuse	3,239	Noxious Trades	2,092
Slopwater	587	Nursing Homes	45
Smoke	226	Private Cows	12
Stables	809	Restaurants	1,217
Stormwater	195	Tea Rooms	2,112
Unspecified	1,666	NOTICES SERVED—	
Service Complaints	378	Statutory	2,896
Wells	82	Others	2,750
CYANIDE FUMIGATIONS—		Prosecutions	165
Supervised	1,811	Attendance at Court (Hours)	231
INFECTIOUS DISEASES—		Licensing Court Hours	354
Cases Investigated	1,041	Special Duty	179

LICENSED PLACES.

From 1st July, 1936, to 30th June, 1937, 5,464 applications for licences of various kinds have been dealt with, the premises in question being in all cases carefully examined as to sanitary requirements.

	Granted	Refused or not taken out	Total
1. Tea Rooms, Hotel Dining Rooms, Boarding Houses, Restaurants, etc.	1,238	139	1,377
2. Dairies and Cowsheds	183	27	210
3. Milk Shops	164	23	187
4. Butcheries	590	74	664
5. Bakers and Confectioners	163	76	239
6. Permits to introduce Milk	609	61	670
7. Kaffir and Asiatic Eating Houses	188	45	233
8. Nursing Homes	23	34	57
9. Laundries	65	12	77
10. Ice Cream Vendors and Manufacturers	482	23	505
11. Noxious or Offensive Trades	337	59	396
12. Aerated Water and Ice Factories	32	1	33
13. Hairdressers and Barbers	388	45	433
14. Lodging Houses	2	—	2
15. Hawkers and Pedlars of Foodstuffs	94	287	381
	4,558	906	5,464

PROSECUTIONS.

Three hundred and eighty persons were prosecuted, involving 406 charges, for various breaches of the Public Health Act, Local Government Ordinance, Food and Drugs Act, Slums Act, and Public Health By-laws.

Of the 406 charges, 384 convictions resulted, and fines aggregating £1,904 12s. 6d. were imposed. Particulars are appended:—

Offence	Race			Total
	Whites	Natives and Coloured	Asiaties	
Dirty and Verminous Premises	64	10	26	100
Fumigation By-laws	2	—	—	2
Fly Breeding	10	1	2	13
Insufficient Sanitary Accommodation	17	—	—	17
Nuisances (Dirty Yards, etc.)	17	1	4	22
Slums Act	3	—	—	3
Adulterated Milk	116	—	7	123
Food and Drugs Act	13	1	13	27
Unsound and Adulterated Foodstuffs	1	—	3	4
Food Exposed to Contamination	16	1	1	18
Unsound and Unstamped Meat	50	—	2	52
Dirty Food Stores	—	—	1	1
Obstruction	3	—	—	3
Butchery By-laws	11	—	6	17
Kaffir Eating House By-laws	2	—	—	2
Midwifery Regulations	2	—	—	2
	327	14	65	406
RESULTS —				
Convicted and Fined	296	14	62	372
Convicted and Cautioned	11	—	1	12
Dismissed	8	—	2	10
Withdrawn	3	—	—	3
Orders Granted	8	—	—	8
„ „ (no Fine)	1	—	—	1
	327	14	65	406
AMOUNT OF FINES £	1,333 2 6	65 10 0	506 0 0	1,904 12 6

This work is supervised by the Medical Officer of Health, his Deputy, the Assistant Health Officers, and the Chief Health Inspector, under whose directions proofs of evidence, summonses, subpoenas and charge-sheets are prepared and handed to the Council's Solicitors.

